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CONTENTS

News

- 11** Extensive Amiga news from Europe, plus 5tateside too.

- 13** Advertisers Index

Editorial



The astute will have noticed a subtle audio theme about this issue. It's time to move on from the old days of four channel 8-bit sound into the world of professional audio. Find out how, starting on page 32. Meanwhile we take a new look the Video Toaster, which is now available cheaper than ever. Rounding off the features we've got Andrew Korn to unravel the web of confusion surrounding that bombshell from Amiga Inc with an update on what's happen since then. Not to mention all of this...

Tony Morgan, Editor

Screen Scene

Game Reviews

- 42** Genetic Species
48 Foundation

Tips Centrel

- 49** Adventure Helpline
50 Dueke 5pecial
52 Explorer 2260 Diery

Tech Scene

- 54** SoundProbe 2.0
56 Semplitude Opus
58 Eyetech CDPlus 5E
61 VDC200p Digicam
62 Siamese V2.1
63 Scan Megic
64 Cetweesel MkII
68 PD.net
68 PD.post
70 Art Gallery
72 User Groups

Workshop

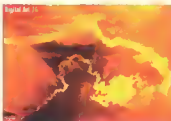
Cover disks

14 Super CD-RDM 25

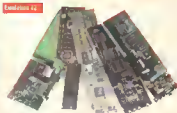
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18 Cover disks

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Digital Art 25



- 78** Digital Art
78 Amiga C Programming
82 Emulation
84 Net God
85 Surf of the Month
86 Wired World
88 5cele MM300
90 Reviews Index
95 Beck Issues
96 D&A
99 A to Z
100 Beckchet
103 Subscriptions
104 Points of View
106 Techno Tregedies

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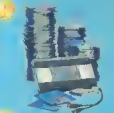
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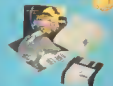
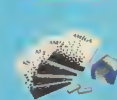
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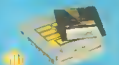
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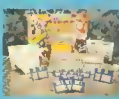
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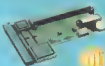
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- 50MHz 68030 Inc. 8MB RAM (recommended)
- Graphic Card versions in development



SPECIAL OFFER	
Special FPU prices when purchased with any accelerator card	
20MHz (PLCC) ...	£10
33MHz (PLCC) ...	£15
40MHz (PGA) ...	£20
50MHz (PGA) ...	£29



- Game Features
- Full Motion Video
- Rendered in Lightwave
- Several sub-games
- Huge game on 2 CD-ROMs

CD-ROM FROM

£49.95

- For A1200/600, A500 call
4Way buffered interface + IDE 97*
Chaos Engine*
Oscar/Diggers CD-ROM*
Power Supply Unit*
- 24x Internal £49.95
24x External £89.95
32x Internal £59.95
32x External £99.95

*Only comes with External CD-ROM drives. Internal drive is also suitable for the Power Tower system, requires IDE interface and ICL fix 97

£169.95

- 24x Internal CD-ROM £89.95
32x Internal CD-ROM £99.95
CD-ROM comes with 3 way SCSI cable

£99.95

SCSI FROM

£79.95

- Squirrel PCMCIA SCSI Interface
External Power Supply Unit
Chaos Engine CD-ROM
Oscar/Diggers CD ROM

4MB 4MB RAM

- 4MB only not upgradable
A1200 4MB RAM £39.95
40MHz FPU £15.00

32-bit zero wait state

- MByte 32-bit zero wait state
Fast-RAM
Auto-recharge battery clock
Socket for PGA FPU 68892 up to
50MHz
Fully auto-configuring Chip-RAM
Fits easily into the trapdoor
4MB PCMCIA compatible
(not BMB)
- 4MB RAM £45.95
BMB RAM £55.95
40MHz FPU £15.00

Inc 2MB zero wait state

- Inc 2MB zero wait state Fast RAM
Auto-recharge battery clock
Fits easily into the CPU socket
Fully Auto-configuring RAM
Increases the speed of your CDTV
CDTV 2MB RAM £49.95

TMB of Chip RAM

- Mini Mega Chip £99.95

- Factory installed 2MB RAM
Auto-recharge battery clock
Fully auto-configuring RAM
Works with all A500's WB1.3 and
above

- A500 2MB RAM £49.95

- 1MB CHIP RAM
Fits into the A500+ trapdoor
Fully auto-configuring Chip RAM
Works with all A500+

- A500 1MB CHIP RAM £19.95

- 1MB CHIP RAM
Auto-recharging battery clock
Fits into the A600 trapdoor
Fully auto-configuring Chip RAM
Works with all A600 & A600HD
A600 1MB CHIP RAM £24.95

CDTV 2MB RAM

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ITEMS	
TOTAL (INC DELIVERY) £	CREDIT CARD No <input type="text"/>
SIGNATURE	EXPIRY ISSUE No.
DELIVERY (UK Mainland Only) 2-3 DAYS £3.00 <input type="checkbox"/> NEXT DAY £6 <input type="checkbox"/> SAT £15 <input type="checkbox"/> Northern Ireland £15 <input type="checkbox"/> Monitor & Tower £10.00 <input type="checkbox"/> (UK ONLY)	

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THE NEW POWER FLYER

Power strikes back again with a faster E-IDE Controller for the Amiga 1200. If you have recently bought a Hard Drive and you've probably realised that it is slower on your Amiga than on compatibles. Power can now solve that problem, thanks to the Power Flyer, a software and hardware solution which completely replaces the IDE controller of your Amiga 1200.

In PIO-4 mode it is possible to reach a maximum speed of 16 MB/sec. Most drives will increase their transfer speed from 2.5 MB/sec to 7 MB/sec.

Tested with most accelerator cards, we found that the best performance is achieved with Apollo cards, (especially the 68060 66MHz ones).



- Up to 4 E-IDE and ATAPI devices can be connected
- Supports mode PIO-0, PIO-3 and PIO-4 (AT200 standard controller supports PIO-0)
- Meets specifications for ATA-3 and FastATA-2

Power Flyer
£69.95

POWER MOVIE

'The World of Amiga' show saw the launch of our most recent innovative product, Power Movie.

This product is a long awaited tool for easy Full Motion Video editing. We anticipate that it will be popular with the developers of Multimedia projects or videogames and whoever needs to put together thousand-frame-long 3D rendered animations with synchronised soundtrack/sound FX and in need of playing the resulting animation in real time straight from a hard drive or CD-ROM. Each frame can be in 256 or HAM 8 colours and have a different palette.

Power Computing is in the process of licensing PowerMovie according to its final use. In order to keep its price down, Amiga enthusiasts will be able to buy the software with a cheaper licence for personal, strictly non-commercial use. Commercial usage requires a business licence for companies planning to use the software and the files it creates for commercial products i.e. video games, Multimedia, help-files, etc.



POWER MOVIE PRODUCTION



Power Movie
£34.95

Commercial Use
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SCANMAGIC FLICKERFIXER

A scan doubler works by doubling the vertical frequency of the Video compatible Amiga modes (15KHz, Pal, NTSC and Euro36). The signal generated will then be displayed by any standard SVGA monitor.

The more expensive flickerfixer adds one extra feature to the ScanMagic. It eliminates the flickering from all interlaced Video compatible Amiga modes.

Nobody can stop you anymore from buying a nice, inexpensive, PC compatible monitor (check our prices and models, all sizes are available).

- Doubles the Vertical frequency of the Amiga PAL, NTSC and Euro36 video modes
- Allows you to use any standard VGA monitor with your Amiga 1200 and 4000
- Fits internally-easy installation
- VGA Adaptor included
- Pass through of all other modes

Internal	£54.95
Internal Inc. Flicker Fixer	£99.95
External with Flicker Fixer	£99.95
ScanMagic External	£69.95
VGA Adaptor ..	£15.00



SCANMAGIC INT.
£54.95

POWER CAMERAS

Power VDC100 and VDC200 Digital Cameras

Olivier Roberts, of FLYG Editor's fame, is the author of the Power DC, the software for Power's Digital cameras.

Video format: digital
Image/Video: 250,000 pixel CCD
24-bit colour
Resolution: 320 x 240 (standard),
640 x 480 (high resolution)
Memory Stores up to 20 images
(20 standard, 10 high or a mixture of both)
Real Time Video as Black & White (NTSC)
Shutter Speed: 1/60 to 1/16000
Focus Range: 10cm to infinity
Power Supply: 4 AA 1.5V batteries
or DC Power adaptor

Memory: 2MB, stores up to 30 images (standard mode)
Compact flash memory slot
Built-in flash
Real Time Video in colour (Pal)
Shutter Speed: 1/60 to 1/4000
Focus Range: 250mm to infinity



VDC100 CAMERA



VDC200 CAMERA

VDC 1.3 Termination prices
Image/Video: 470,000 pixel CCD
24-bit col
Resolution: 320 x 240 (standard),
640 x 480 (high resolution)
45mm Colour TFT LCD monitor

New software: A colouring

VDC100 Camera	£99.95
VDC200 Camera	£199.95
2MB Flash RAM (VDC200)	£49.95
4MB Flash RAM (VDC200)	£TBA
50 Alkaline Batteries	£25.95



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NEWS

News from Motorola



IBM and Motorola have announced that the partnership at their jointly funded PowerPC research centre is to end. The Somerset Centre in Austin, Texas will now be wholly owned and operated by Motorola. However, both companies have stated that they will continue to co-operate closely on advancing and marketing the PowerPC architecture. The PowerPC is important to both companies, especially in the area of embedded processors – rapidly expanding sector of the market. The split between Motorola and IBM is not expected to have any adverse effect on the production of PowerPCs for desktop applications.

In fact Motorola say that complete control at Somerset will permit sub-division in this market.

The fall out between IBM and Motorola is allegedly due to Motorola's proposed AltiVec Technology. AltiVec is a multimedia

extension to the PowerPC architecture for high-bandwidth data applications – such as video/audio processing and networking. It is intended to compete with Intel's MMX extension to the Pentium but is far more radical. AltiVec processors will feature a 128-bit wide vector unit, capable of operating in parallel with the FPU and ALU, and which will employ the SIMD paradigm (Single Instruction Multiple Data) – an optimization making the processing of data streams possible with very few instructions and hence more efficient. The first processor incorporating AltiVec is the G4, a 32-bit PowerPC chip scheduled for release in the first half of 1999.

Motorola are also looking rather further into the future. They are said to be designing a 64-bit processor which will rival the iA64 series: the next generation project from Intel and Hewlett-Packard. No details of this new chip have been released publicly yet.

Amiga gets new Web browser

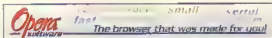
Work is under way on porting The Norwegian shareware browser Opera to the Amiga. Opera is currently available only on Windows platforms, where it is well-respected and popular, mainly due to its Amiga-like small size, efficiency and user-friendliness. The decision to bring Opera to the Amiga is because of the tremendous response voiced by the Amiga community to Opera Software's Project Magic initiative – a survey of interest in the Opera browser for 'alternative' operating systems such as AmigaOS, BeOS and UNIX.

The Amiga version of Opera is being produced by the UK-based company Remjam Consultants. Their project leader, Tim Cunningham believes there is room for Opera in the Amiga browser market because it offers more functionality and



stability than current browsers. The first release of this product is scheduled for December 98 and will be for Classic Amiga with Web3.1 and a minimum of 4MB of RAM. A PPC version is expected to follow. While pricing has not yet been confirmed, it is expected to be comparable to the PC version (currently USD \$35 or about £20).

More information can be found from Opera's web site at <http://www.opera-software.com/>.



PPC Emulators are coming

Microcode Solutions has finally released the PC version of the Fusion Macintosh emulator. That's not good news for Amiga users in and of itself, but it does finally free up their resources to get back to work on Amiga projects.

PowerUP-compatible versions of both Microcode's PCx (PC-compat-

ible) and Fusion (Macintosh) have been in progress for some time, but Microcode diverted all of its efforts to the completion of their first PC product, Fusion for MS-DOS.

Now that it has been released, Microcode have indicated that they are back to work on Amiga products but declined to offer any potential

release dates. Lingering but unconfirmed rumours have suggested that Mac OS 8 for PPC contains enough of the original ROM code that Fusion PPC would be able to run Mac OS 8 out of



the box, without requiring ROM images. We await Apple's opinion on the matter – if true it could make total PowerMac solutions possible. You can visit Microcode Solutions's new website at <http://www.microcode-solutions.com>.

MICROCODE SOLUTIONS

PPaint 6.4 free, PPaint 8 coming.

PPaint 6.4, a version of the premiere bitmapped paint package that is barely eighteen months old, is being made freely distributable by the publisher's, Cloanto. To get your own fully functional, free copy of this package visit the biz/cloanto directory on the AmigaNet.

Cloanto are currently working on version 8 of PPaint. A major rewrite is to be undertaken to create more portable code, thus ensuring PPaint's future no matter what direction Amiga takes with any new OS. New features planned for this release include true-colour, layers, and improved animation facilities.



CLOANTO

Stop Press

Cybervision PPC is here

Just as this issue was going to press, we received confirmation that the Pannadale 2-based Cybervision PPC card from phase 5 will be shipping about the time you are reading this. The Pannadale 2-based card will come with an Amiga version of the Rev 3D library in both PPC and 68k versions. The BiscardVision PPC version of the card for A1200 owners is expected a month after the A4000 Cybervision PPC version. At around the same time, phase 5 will release version #6 of their PPC library for Cyberstorm PPC and, with a Flash ROM upgrade, for Blizzard PPC. This version of the library contains various new features such as shared library support. This will be the last version of the PPC library in the immediate future.

ICOA User Rep Selected

In a landslide result, occasional CU contributor Harry Lasek was selected to serve on the ICOA Steering Committee as one of five voting members. The other four have yet to be selected, but will be chosen in upcoming ICOA elections. Lasek received 174 out of 274 votes.

Some have voiced concern that someone was elected to represent the world's users out of a list of three Americans and a tiny electorate, but the ICOA have said that future elections will be less rushed and give more of an opportunity for Amiga's world wide to become involved. According to ICOA, Lasek's job for the next year is "to combine the roles of consumer advocate, opinion gatherer, strategist and community liaison." For more information on the ICOA, try www.amiganet.org/icoa. The Amiga Zone can be visited at www.amigazone.com.



Win Digital Grooves

To celebrate the launch of their new CD, Audio Works are giving away five copies of Digital Grooves, a collection of 20 Amiga created tunes ranging from Twinkly computer game soundtracks to moody computer game soundtracks plus a few other bits and pieces along the way. To stand a chance of winning a copy correctly answer the following question on the back of a postcard and remember to include your own name and address.

The word 'digital' is derived from the Greek word for which part of the body? The first five correct applicants drawn from the bag after August 30th 1998 will get a copy of the CD.

Alternatively secure your copy by sending a cheque or postal order made payable to David Dwyer for £5.99 to Audio Works, PO Box 3567, Milton Keynes, MK2 2ZN. For further information phone: 01908 673794 or email audio3567@aol.com.

Eyetech deals

Eyetech have announced improved specifications for their EZ-PC lower. Responding to comments last month's review of this Amiga/PC Samesee lower system, Eyetech are increasing value for money by upping the specification of the tower to include a 30-bit A4 full bed scanner, 64Mb RAM on the PC, 3.2Gb hard drive, and 32x CD Rom.

The price remains at £599.95. Eyetech claim that this makes it 40% cheaper than an equivalent specification Zorro 3 machine, with the added bonus of a free PC.

Eyetech are also offering people wishing to buy their 20 speed CD ROM drives (reviewed on page 58) a special deal. Cut out the voucher below and send it with your order for a 24 speed drive at the same cost - Eyetech tell us the mechanism is the same make. The offer is limited and on a first come first served basis. Call Eyetech on +44 (0)1642 713185 or see their ad on page 39.



20x to 24x CD ROM Upgrade offer. Valid only with orders from Eyetech Group, Ltd. While stocks last. This voucher must be sent with your order to qualify.

In Brief

Kickstart Amiga Sala

There will be a second hand Amiga sale held on 30th August at the Brook Hall, Otterdown, in Surrey. The Kickstart sale will charge an entry fee of £2. £1 to members of the user group. Sellers must book in advance and prizes are wanted to keep away. Contact Rob Gilbert (lgibie@arrakis.com) or Graig Howson (01483 536430) for more details.

AmigaSoc reps UGN

The UGN, the worldwide network of Amiga User groups, has appointed AmigaSoc as their official UGN representatives in the UK. AmigaSoc have promised to work closely with other members of the UGN to provide help and support to all UK user groups. The AmigaSoc resource includes a database of UK usergroups on their website, www.amigasoc.org. All user groups not currently listed are invited to contact them for inclusion. email: christ@uk.amigasoc.org or more details.

Fusion, PCx drop

As the PPC version of fusion gets into a gear, Bini ersoft have dropped the price of their current stocks of the current line of Microcode products. Fusion 3.1 and PCx 1.1 will now be sold for £29.95 each or £49.95 for the pair. Contact Bittersoft on 01908 261486.

Amiga gets BSE

Amiga, the Belgian Scene Event, will be held on the 7th of August in Drapenbeek, Belgium. This demo party will include competitions for 40k intro, demo, music and graphics. For more details check out <http://base.bas.org> or email bse98@gmx.net.

Midwest Expo

The Amiga Central Ohio Network is organising a show for the 2-4th of October to be held at the Hyatt Regency Columbus Ohio. It will be the largest (by floorspace at least) US show, and promises a good list of exhibitors and seminars. www.emicon.org/mae.html



Stateside News

by Jason Cumstan, Editor in Chief of *Amiga Report Magazine*

Amiga businesses, get listed

PIM Publications, the publisher of *Amazing Computing*, America's largest Amiga print magazine, is once again planning the resumption of the AC's Guide.

The Guide is a tome of Amiga companions and products that was published twice a year until the '90s.

...since a new publication date has
yet been set in stone, it's not

Too late to be included in the next
Guide

Listings, as always, will be free in the new edition. For more information, contact PIM Publications at PO Box 9490, Fall River, MA 02720, or online at www.pimpub.com.



Health of Nations Leadership Initiative Center

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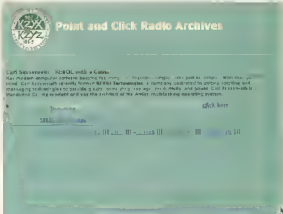
Sassenrath talks

The fundamental approach of his new REPOL project may be something few truly understand and even fewer have actually seen any physical evidence for, but Carl Sassenrath—who recently formalized his avant-garde computing concept into a company, sure finds himself « the news a lot these days.

He recently gave a lengthy interview to local radio station KZYX on REBOL and his take on the future of computing! If you have access to RealAudio players and wish to hear the interview, it is online at www.kzyx.org/pd/archives/rebol.htm. If you don't have RA abilities, you can still check out the blog on Sassenrath on this website!

He is also slated to figure very heavily in developer and general user discussion and Question and Answer sessions at the California AmigaWest show of this summer. It may not be a complete coincidence that his largest public push to date for REBOL Technologies will come at an Amiga show relatively nearby his operations, also in California.

REBOL might best be described as something more than a new language, but less than a new operating system. For some more information, check out

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Erytech	38/41	01642 712185
Fast Computers	27	0111 562 3552
Fast-Mail Home Computing	96	01581 851062
First Computers Centre	94	0122 2210444
Gilbert Image	81	0121 888 8581
High	08/5	0508 727800
Infocomm	22	01543 254037
Power Computing	0-10	01224 851500
Selectsoft	23	01782 292629
Word Solutions	11/3	0118 2467888
Where People Technology	88/88	0800 822321
Wizard Development		0800 362 1008

AMIGA.INFO

Possibly another minor victory in the slow redemption of the Amiga in the eyes of the North American computing press, Ontario's *Monitor* computer publication has added an "Amiga Info" section to its online version. The Amiga coverage is handled by Ray Binda and Thomas Leroux, and provides summary and commentary on current Amiga issues and products.

Presumably a strong performance online could lead to actual column inches in the magazine proper down the line. The Monitor's print distribution is 36,000 Canadians.

For more information, contact the Monitor at 613-596-1256 or www.monitor.ca/monitoronline

[illegible]

ROM Super CD-ROM 25



WELCOME to CUCD25. This CD is crammed full of programs, games, utilities, mods and a host of other goodies. If you don't yet have a CD drive, this is your reason to buy one. Prices have never been lower and 650MB of quality software each month is just too good to miss out on.

How much of what?

AudioSpectat	68MB	Magazine	21MB
CDSupport	71MB	Online	38MB
System Files	13MB	Programming	15MB
CDROM	22MB	Readers	19MB
Demos	23MB	Sound	62MB
Games	168MB	Utilities	20MB
Graphics	44MB	WWW	28MB
Information	4MB		

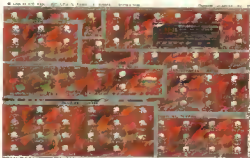
Making the most of CUCD 25

All CD-ROMs are designed to be used whether you boot from the CD or your normal Workbench. If you boot from the CD, everything is setup and ready to go. If you want to access the CD from your Workbench, you should first run IntCD. This sets up various assigns and paths needed by programs on the CD, so if you don't do it, things won't work. It doesn't make any changes to your system, or write any files to your hard drive, all changes are temporary and can be reversed by running IntCD again. The error some people were experiencing with updatcopy has been fixed now, and the fix means that you won't see the error again, even with older CDs.

Your own custom CD

In the past you had to use whatever file viewers we set up on the CD, since these had to work with all Amigas they were quite limited. From CUCD12 we decided to allow you to specify how the CD should work on your Amiga and included CDPrefs in the CD/Support drawer. If you have never run this before you should be asked if you want to when you run IntCD. CDPrefs lets you specify which program you want to use to handle each type of file, graphics card users can view pictures in full 24 bit colour. ProjectXG users can listen to midi files through their midi card, people with sound cards can listen to mods with an AHI module player and PowerPC users can use the fast file viewers and mpeg players available for their machines. It also means we were able to provide different defaults for Workbench 2.x users.

Once you have run CDPrefs, your setting will be saved to your hard drive and will be used every time you use this CD or any other CUCD. Some people had problems with the original use of IDot, partly through a lack of understanding of how it worked and partly through a lack of explanation from us. All icons now use CUCDfile as their default tool, and the previous IDot problems should be a thing of the past. IntCD now copies CUCDfile and it's configuration to your hard drive, if it's not already there. This means that files copied from the CD will now work without needing the CD present. You will almost certainly need to run CDPrefs to set it up to use your own viewers, but you should do that anyway as it will result in faster access. If you do have any problems, make sure you have run IntCD, at least once.



Highlights of CU Amiga Super CD 25

**AmigaAMP**

CUCD/Sound/AmigaAMP

AmigaAMP is not just another mp3 audio player. As well as supporting PowerPC and 68000 processors for decoding it also has a compact but useful interface looking like an audio CD player. But it doesn't stop there, AmigaAMP can use skins designed for WinAMP the Windows port of AMP.



These skins completely change the appearance of the interface and there are hundreds (possibly thousands) to choose from. The skins directory contains well over 100 different skins, with an icon to start AmigaAMP with each one.

**ToolManager**

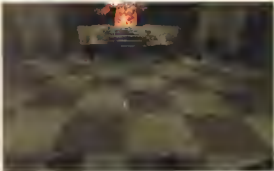
CUCD/Utilities/ToolManager

ToolManager has to be one of the biggest time savers available. It offers several ways of starting programs, all of them much faster than opening several levels of drawers to reach an icon: you can start programs from a dock (a button bank), the Tools menu or a hotkey. It also supports drag and drop, drop a picture's icon onto the PPaint button and PPaint will start up and load the picture for editing. Drop any file onto a Multiview (or IDeR) button and it will be viewed or played. This drag and drop ease of use also extends to setting ToolManager up through its preferences editor.

MCP

CUCD/Utilities/MCP

Since MCP was featured in the Workbench 2000 article in the January CU Amiga, it has undergone many changes and refinements. This is the latest beta version of MCP, which has proven very stable here despite being classed as beta. The advice given in January



about these are Double Total Conversions. They work with the full version of Double but give you a completely different game. There are many total and partial conversions written for PC Double, and most of them will work with the Amiga version, so watch for more in forthcoming CUs.

still applies: try the options one at a time if you try to switch everything on at once you are asking for trouble – this is a fairly powerful commodity.

ProNET

CUCD/Online/ProNET

Of all the various solutions for networking two Amigas without expensive hardware, ProNET is the most flexible and stable. You can connect machines using either the parallel or serial ports (or even the floppy drive ports with a bit of DIY hardware). You can also find ProNET in the CDSupport drawer, complete with icons to start up either parallel or serial links for those of you who want to link a CD32 or CDTV to your Amiga.

WebPlug

CUCD/Online/WebPlug

It's impossible to have a WYSIWYG HTML editor, since HTML itself is not WYSIWYG (What You See Is What You Get), but WebPlug does a good job of creating HTML pages through a graphical interface. Because you see the actual HTML code in the window, it helps you to learn and understand what's happening, rather than hiding it from you.

AmigaWorld

CUCD/Information/AmigaWorld

AmigaWorld is a database of information on just about every country in the World. Using a straightforward graphical interface, you can see exactly where a country is and find out information about the country: its currency, languages and much more.

Making things work

Wherever possible, we have tried to make software work straight from the CD, this isn't always possible for a number of reasons. Some programs need to be installed to your hard drive to work, often requiring specific system files. These files are usually on the CD so running InitCD often helps here. Most software contains a list of system requirements in the documentation, and some will not run unless you have the required processor, memory operating system version or chipset.

Some programs, particularly demos and games are written in an OS illegal way. This can mean they only work on specific machine specifications, sometimes the readme states this, but not always. Many demos are intended to be run for a while, the icons we add simply start them from a script. In some cases this will not work, especially demos that need a lot of Chip RAM. In this case you will need to boot without startup-sequence and run the program from the shell. Your Workbench manual should explain how to do this.

What's on this month's CU Amiga CD?



AudioSpecial:

A huge collection of software and utilities to help you create, process and listen to your musical masterpieces. This includes special versions of SampleTime and SoundProbe, plus a copy of MakacD so you can commit your production to CD and send them to us as a potential audio track for a future CU Amiga CD.

CDSupport:

This contains various support files such as mod players, anim players, GMPPlay, MUI, ClassAd. Most importantly, this is where the CDPrefs program lives. With this you can customise your CUCD to launch your choice of program for each type of file. Two other notable icons in here are Docs guide, with links to all the program documentation files on the CD, and Index. Run Index, type in the name of a program, or part of it, and it will search the contents of the CD for you. You can either search the current CD or the index files of all CUCDs since number 4. CDSupport also contains icons to start ProNET in various configurations, ready to use when linking a CDTV or CD32 to another Amiga.

CUCD:

This drawer contains most of the

CD contents, here is a selection of what each drawer holds:

CDROM:



We have updated versions of IDE Fix and CDCat, a CD contents database, along with a new audio CD player. We have also added to the CDID collection, there are now over 6300 CDs here. Each one has the artist and title in the file comment, so it's easy to pick out the right ones for your CD collection.

Demos:



Not quite the mega collection of last month, but there's still over 23MB of fleshing swirling, scrolling, sliding, thumping demos.

Games:



Plenty of games this month, with a special demo of Genetic Species and some Total conversion additions for Quake. There are also a couple of collections of game cheats, an update for Foundation new editor and data files for F1GP and a huge FMV game.

Graphics:



The 3D renderer RayStorm has been updated and now features version for 68020, 68040, 68060 and PowerPC. There are also new file viewers, and updates for Phlogogen2 and more icons and backdrops to customise your Workbench.

Information:



This drawer contains updated reference guides on Amiga system files. The AmigaWorld country database contains a vast amount of information on just about every country in the World.

MegaMag:



This drawer contains support files for the various features within the magazine, such as the source code for the C Tutorial, the programs reviewed in InternetPD, all of the programs mentioned in Wired World and the latest information on the universe of Explorer2260. There is also an update to last month's Scales gateway.

Online:



We have a wide range of software this month. Not only for the Internet, but also BBS and networking software as well as the latest news from Aminet and archives from the newly resurrected CU Amiga mailing list.

Programming:



A host of software and information for programming in C, E, Blitz, with utilities for MUI, Triton and GadTools. We also have the latest manual libraries and support files.

Readers:



All your own work. These are the games, utilities, mods, pictures and emms that you send us. If you think you can do better, do it.

Sound:



In addition to the AudioSpecial, there are utilities, players, mods and samples here, as well as the superb AmigaAMP mp3 player, with a huge collection of skins.

Utilities:



As usual, this drawer has a wide variety of useful or interesting utilities. Updates to old favourites like MCP and ToolManager are alongside new creations such as SmartFilesystem and IconHandler.

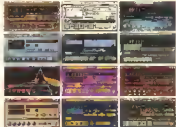
WWW:



More useful and interesting pages from the World Wide Web, plus the latest versions of the main Amiga browsers.



AmigaAMP Skins:



DISKS

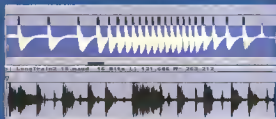
Samplitude CD



Both CD and cover disks this month come complete with **Samplitude CD**, an excellent sample editor and CD audio preparation application.

Features

- Professional quality sound processing
- Audio image preparation features
- Multiple sound card support
- 100% Compatible with stock A1200



Installation and setup

Installation of **Samplitude CD** is easy. Boot from your hard drive and then drag the **Samplitude** icon from the cover disk or Audio Special drawer of the CD to wherever you want it installed on your hard drive. Now double click the icon you've just put onto your hard drive to initiate the installation. Once installation has finished you can run **Samplitude** straight away. Select **Update** from the **Workbench Window** menu to reveal the installed **Samplitude** software.

Samplitude CD is a special version of the latest release of **Samplitude** Opus reviewed in this issue on page 56. It

offers everything you need for recording, editing and preparing data for audio CD ROMs, and along the way acts as a capable sampler and sample editor too. All you need to burn your CD is a CD writer and a CD writer program that supports the new AIFF-CD extension of the AIFF audio format. **MakeCD** is currently the best choice for this, which can also be found on this month's CD.

Samplitude CD allows you to record data from **Maestro Pro** sound cards (digital I/O cards manufactured by **MacroSystems**), all **Toaster** compatible cards (like **VlabMotion**) and all **Prelude** compatible cards (like the **Prelude II** and **Festiva** boards). A range of parallel port samplers is also supported. Playback via **Paula** (Amiga internal sound) is also possible.

Samplitude uses a complex hard drive memory system which allows you to work with samples completely residing on your hard drive. In order to get the best speed you should follow a few simple rules:

1. Use a filesystem block size of at least 16K if you want to work with long samples. To set your filesystem block size to a higher value follow the documentation of your SCSI or IDE controller software.

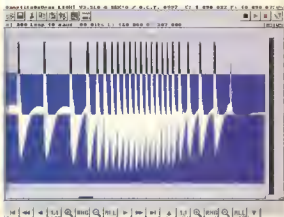
2. Use a controller on your CPU card or on your motherboard, not on the Zorro bus. Controllers on the Zorro bus tend to block the system.

3. Set **Samplitude CD**'s internal buffers to a size divisible by the filesystem's block size. For example, when using a filesystem block size of 16K, set **Samplitude**'s buffer size to 16, 32, 64 or 128K.

4. Use DOS access when working with slow setups, and use **DEVICE** access when working with very fast setups. Generally you should try this out. In most cases a DOS access will be faster than **DEVICE** access. **DEVICE** access can only be used with filesystem block sizes of 512 bytes.

To adjust your settings start **Samplitude CD** and press **g** or select **Preferences/System**. After changing everything according to your needs, close the window and select **Save Setup** from the **Preferences** menu. Next you should open a new project or load an existing project into **Samplitude CD**. If

▼ **Samplitude CD** offers a wide range of sampling and recording possibilities.



Audio image preparation

Ranges and cursors are used in creating AIFF CD images. A range defines a CD track while a cursor defines an index.

This gives you the opportunity of sampling a complete record's side in one take. Select the single titles as ranges (leaving the space between untouched, thus sparing editing time), store the ranges and eventually create cursors within the ranges (these will be converted to index markers on the audio CD). Creating a CD copy of a record can be done just seconds after having sampled the complete record! Of course, duplicating copyrighted material is against the law. Here's how it's done anyway...

Simply do an AIFF-CD export to create the audio image. The parameter window popping up will allow you to choose some parameters. Usually you should leave them just the way they are. Index markers and Tracks are what you want, no disabling them in this window will result in a standard AIFF file, which could have been exported by the standard AIFF exporter as well. Copyright and Emphasis can be set if this is desired (usually you won't have Preemphasized audio data).

AIFF-CD is an extension to the standard AIFF which can be interpreted by MegaCD and quite probably other programs as well. Prelude's Graphic Tape Deck is already being extended to support AIFF-CD track and index markers. If an application can not interpret the TrackInfo Chunk it will still import the complete sample data. Importing AIFF-CD images will create the track ranges and index cursors automatically. If you do not see the ranges right away, open the range manager and manually select them. AIFF-CD images can currently be exported by MegaCD.

The AIFFCD extension is (C) 1998 by Patrick Ohly. Developers support is given by the author and A.C.T., who participated in defining the extension.

Samplitude CD is a complex program. You can get used to it by trying out the functions and playing around. If you have any problems you can contact A.C.T. directly at any time. There is also a mailing list to which you can post questions.

is considerably slower than when using just RAM.

RAP RAM Projects are based in your computer's RAM. Editing these sample projects is very fast, but you are limited to only your system's memory.

Generally you should use RAPs if you want to do edit data cutting, effects etc but use HDPs if you want to create audio images for CD or simply convert large amounts of data. HDPs are loaded much faster since only the optical representation of the sample data is actually loaded, not the sample data itself.

Once you have loaded some

To pop up the current clip press the ESCape key. The project clip can be handled just like any other project and can therefore be saved and exported just the same.

Converting sample properties

In Samplitude CD the Pitch Shifts/Time Stretcher capabilities are disabled (like most of the high end functions available in Samplitude Opus), but you can use the Resampler. Imagine you imported a 22kHz IFF sample and want to burn that to CD. You need

it in 16-bit, 44kHz stereo, so you should resample it to 44kHz first.

Choose Effects/DSP/Resample, click on 44kHz and select OK.

Remember to change the project's parameters to 44kHz. Now press 'p' to select Effects/Parameters.

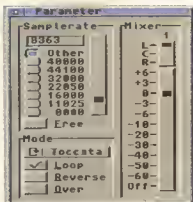
The next step is to change the sample's resolution (if it is not in 16-bit already). Choose Effects/

Project/Special/Change Resolution

select 16 and click on Convert. The

last step is to create a stereo project out of a mono one. Select Effects/Project/Special/ProjectStereo or press 'j' on the numeric keypad (the key above 8). That's it, you now have a CD ready sample.

Notes that although the resampling quality of Samplitude Opus CD already is very good the full version will give you studio quality with nearly no windowing fragments.

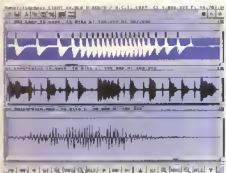


▲ Select the output device and rates from here

data into Samplitude CD you can start editing it. Click somewhere into the sample edit window, hold down the mouse button and move the mouse. A range will be created. The reason for ranges being created rectangularly is that you can make offset adjustments with Samplitude (Voltage offset etc.). If you prefer a time space oriented range only simply activate Preferences/Vertical Clip.

When cutting data from your sample to the clip board there will be a delay while Samplitude Opus transfers data to the clip. You can adjust the way clips are created - if you want to use the same kind of project you are editing in the clip as well set Create Clip to Original in the system parameter window (Preferences/System or 'g'). If you always want to create RAPs when creating a clip set it to RAM - or if you want to use HDPs set it to Hard drive. This way you can easily convert an HDP to a RAP and vice versa - simply adjust the clip project type, select your complete sample and press 'c' (for copy).

you do not have a project to load, select Project/New/RAM. Now press 'p' or select Effects/Para Meter. You should adjust the playback hardware setting if your system is equipped with one of the supported sound cards you will be able to select it with the mode gadget. Close the window and again Save Setup.



▲ Multiple sounds can be worked on simultaneously

First steps

Samplitude CD can import most of the sound formats, auto-detecting

their file format. So if you want to explore the program's capabilities, press Right Arrows + (or select Project/Import/General and try to import some of your sound files. Samplitude CD will ask you whether you want to create a RAM or a hard drive project. These project formats both have advantages and disadvantages. Their use depends on what you want to do. HDP: Hard Disk Projects keep their sampling data on your hard drive (usually in the HDP assign - see Further setups), giving you lots of sampling space to work with -

as long as your hard drive filesystem's space lasts. The drawback of these projects is that editing them



▲ Configure Samplitude CD to suit your system

Reverb, echo...

Samplitude CD's fading capabilities are not limited to linear fade in or fade out like many other applications. And volume has to be handled logarithmically so LGG, LIN and EXP fading characteristics have been implemented. To do a fade out at the end of a long sample select the range where the fade should happen and press 'f' or choose Effects/Amplitude/Fade. The window appearing allows you to adjust any thing you need for amplitude manipulation.

Reverb is implemented in the common way (creates lots of echoes). The parameter window's options should be self explanatory. The same applies to Echo. Note that Convolution (the realistic room simulation using room samples with filter characteristics, early reflection detection etc.) is available in the 'big' Samplitude Opus version only.

Ranges and cursors

Samplitude CD can handle as many ranges and cursors (positions) per project as you want, RAM permitting. There is a Range Manager available from the Project menu (you can pop up the Range Manager's win-

Upgrading

If you like this software you can upgrade to Samplitude Opus LITE or Samplitude Opus (full version) at a special upgrade offer price. Samplitude Opus LITE and the full Samplitude Opus give you everything Samplitude CD offers – and a lot more, including non destructive editing in virtual projects, playlist handling, high quality mixing (full version), several tracks (four in the LITE, unlimited in the full version), high and FFT functions and a studio quality denoiser, SMPTE support, MIDI TC support and other goodies. Please visit the Samplitude webpage at <http://Samplitude.amiga-software.com>.

Prices are as follows, based on upgrading from the cover disk version:
 LITE: 500DM (£15)
 Full: 350DM (£10)
 Add 100DM for shipping on orders from outside Europe.

WolfPac

WolfPac is a 3D, first person perspective version of PacMan. It, by some strange chance, you don't already know, the idea of the game is to run about a maze gobbling pills and avoiding ghosts. There are two types of pills: normal orange ones and blue pills. The blue pills will make you invulnerable to the ghosts for a short time (the ghost will appear to be half height). You will advance to the next level when all the pills have been eaten. Simple.

WolfPac will run on any AGA Amiga with an 020 or better and 4Mb of RAM, although a faster CPU and a graphics card are recommended. A PPC version is also supplied which requires a PowerUp board and ppc.library V45.16.

To start the game all you have to do is double click on the WolfPac icon (or WolfPacPPC for the PPC version). You will then be presented with a screen mode requester. A screen size of 320x240 is recommended. The PPC version will be playable with larger screens, though. If you need any more instructions read the guide file provided. Have fun.

Game Controls

Keypad 5/Cursor up	Move forward
Keypad 4/Cursor left	Turn left
Keypad 6/Cursor right	Turn right
Keypad 5/Cursor down	Move back
Keypad 7/Alt + left	Side step left
Keypad 8/Alt + right	Side step right
a	Toggle fps display
f	Toggle floor rendering
Esc	End game



dow by pressing Right Amiga + J). Ranges and cursors can be named (Range/Store/Other or Range/CursorStore/Other) or put on hotkeys (1 to 10). To put a cursor on the numerical keys on your keyboard press Shift+key (e.g. Shift+1). To store the current cursor on key 1). To store ranges to the function keys press Shift+Fkey. To select a previously stored range or cursor press the corresponding key without shift.

To remove a range, pop up the range in question (using the Manager or pressing the hotkey if it is a range in the first 10) and choose Range/RemoveRange. To remove a cursor select the marker at the top of the sample window and move it to the right or left - out of the screen.

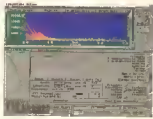


Contact details

Samplitude CD is developed by A.C.T. You can phone them Monday to Friday from 10:00 to 12:00 and 14:00 to 17:00 or send a fax or email to them and they will respond as quickly as possible. There is also an English mailing list being run. If you want to participate in that list, please write an email to ListServ@ect-net.com and tell them to subscribe you.
 A.C.T. - Albrecht Computer Technik
 Seth 2
 21768 Lemstedt
 Germany
 Voice +49-4773-8910-72
 Fax +49-4773-8910-72
www.ect-net.com
 e-mail support@ect-net.com

Sound Probe 2 demo

We've got you an exclusive demo of HiSoft's Sound Probe as well this month. You can play with all of its many and varied effects for as long as you like. The limitations are that it won't save out files and only the 8-bit disk storage system is implemented. This is more than enough to give you a taste of what it can do for your sounds. See the review in this issue for more details. The full program is available from HiSoft for £24.95. Call them on 01625 718 181.





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Eerie Drive 3C - RPG with 3D Graphics
Pulsar: Phoenix, Warship III, Skatol and more

Confused? You won't be.

It's all a mess, isn't it. First there was PPC, then the BoXeR, then Inside Out and Pre/Box. Now Amiga Inc has a Superchip. Confusion reigns - but not for long!



The most common question I was asked by visitors to the World of Amiga show was 'Should I buy PPC?' The news of the announcement was out, and all the people who had turned up cash in hand to join the PowerUp revolution were thrown into a state of confusion as to what to do with their hard-earned cash. It was bad enough when they had to decide whether to go for a PowerUp card or wait for a BoXeR, but Amiga Inc. gave a lot of people a real decision headache. The Amiga seems to have switched from heading no where to heading all over the place in a startlingly short time, and pretty much everyone seems to have been caught on the hop.

The players.

The main players in the unfolding drama are CE phase 5, Haage & Partners, Access (formerly Index), Power Computing, Amiga, Bittersoft, Sinewave Systems and Amiga International. The minor players are many and some may yet play major roles as the play unfolds. Before we delve too deep, let's look at the basic facts one step at a time.

- Amiga Inc. are producing a future Amiga, due out in 2 years
- Future Amiga is based on a new "Superchip"
- Haage & Partners and phase 5 have settled their differences and announced co-operation
- Amiga Inc. will have a developer's machine out in November
- InsideOut, the Amiga on a PCI card, which plugs into a PC, is due in the summer
- phase 5 hope to expand the PPC line and develop PPC Amigas (Pre/Box) by the end of the year
- BoXeR will be out in the summer.
- DCE and Power have dropped the AS5000, but are rumoured to have replaced it with an exciting new project
- Amiga Inc. is behind all of these "Classic Amiga" projects, and want to see them prosper in the time between now and the release of the Future Amiga
- Phase 5 want to run the future Amiga OS on PPC, and Amiga Inc. have admitted that this is possible - and something they would like to see

The contenders.

So what do all these options offer?

PowerUp.

Available: Now

An upgrade path to modern CPU power. Can bring vast processing power and powerful 3D graphics to your Amiga. phase 5 hope to be able to license OS4/5 to run on PowerUP cards

Name that Chip!

Amiga Inc.'s secrecy over the chip company who are making the new Superchip has given rise amongst Internet regulars to an enormously popular new game of chip company guessing.

The rules are simple. Locate a possible candidate, mention them on the newsgroups. Then wait while five people tell you your guess is the best one yet, five people show you major inconsistencies in the argument, three people say your wrong (while hinting that they are in the know), and two people tell you to shut up before Bill Gates reads your posting. Amiga Inc. have assured us that whoever it is, there isn't actually any information about this project on the 'net, so we won't find it. Never mind. It is fun anyhow!

▲ Concept designs: left, phase 5's Pre/Box, top; the Amiga OS 4 developer's machine

BoXeR.

Available August
Advanced modern Amiga design 68060 up to 75MHz, EIDE, PC standard components, faster chip RAM, 2Gb RAM capacity ISA slots, custom slot for planned cheap PPC upgrade

Inside Out.

Available Summer
PCI board with full Amiga functionality Retargets to a host PC over the PCI interface, using Sarnesi software but many, many times faster than Ethernet

Developer's system.

Available November
Basically a PC equipped as above, but will run the new OS4 on the PC side instead of Windows

Pre/Box.

Available Early '99

Powerful PPC based Amigas with one or more PPC CPUs. Could eventually come in a version with several 1Ghz AltiVec G4 PPCs, a prospect that would make e Cray owner jealous. If deals are signed, it will eventually run OS5

BoXeH 2.

Available late '99
Early days yet, but could have PCI. A programmable graphics chip is planned which would replace the AGA chips with a single custom unit capable of all the old AGA modes. Also extended graphics modes such as 600 by 600 24 bit

Future Amiga

Available late '99 early '00
A hardware/software system that will be made available to third party manufacturers. Based on the Superchip, very powerful and could cost as little as £300. Likely to come in a range of different shades including

games console, set top box and A1200 style cheap home computer

An issue of OS.

Currently we have the rather dated AmigaOS3.1 and two incompatible PPC kernels, PPC library and WarpOS. All this is changing. Amiga Inc are working on AmigaOS4.0 which

consists of an API layer sitting on top of an off the shelf OS core such as BeOS or Linux. The API layer is the programmer's hardware abstraction - rather than programming to the processor directly, they program to the OS. This will include some industry standard elements such as probably OpenGL for the 3D graphics API, and will probably include Java and extended AREXX. It will be fairly fundamentally different from OS3.1, most visibly in a tweaked GUI and 24bit screens as standard, but will follow the same design philosophy. It will have Amiga trademarks such as Datatypes, but probably in some expanded form. Most of the familiar file structure of the current Workbench such as devs, libs and so on will continue on in the new OS. OS4 will be followed by a full Operating System, AmigaOS5. It is not clear at this point whether the bought-in OS core will still be used, or whether there will be a custom core written. OS5 will be fundamentally very similar to OS4 at the user and the application programmer level.

phase 5 and Haage & Partner are working together on a PPC kernel, which will be backwardly compatible and contain many improvements. It will include Haage & Partner's now nearly complete 68k emulator, so it will run on PPC only machines such as the forthcoming Pre/Box machines.

The two companies have also said they would like to do an OS3.5 themselves, but that is down to Amiga Inc agreeing to such a thing. Everyone we have spoken to at Amiga Inc, and Amiga International seemed very keen on this idea, and there might even be an agreement by the time that you read this. OS3.5 would run on current

▼ Inside
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**InsideOut****FAQ**

So let me get this straight, there are going to be new Amigas in November?

Not exactly. There are going to be Amiga bridge systems, PCs with an Amiga Operating System running on them. They will probably be dual hardware systems, including a very high end 68060, OS3.1 Amiga in the same case. The real new Amiga will come out in November of next year; the developer's bridge system merely emulates this.

Then it's true that the new Amiga is going to have an Intel processor? I might as well give in and buy a PC.

No, no, no! The new Amiga is not going to have an Intel processor in it. The bridge system runs on an Intel compatible, but this is merely for development purposes. OS4 will run on x86 as an intermediary measure, as it will allow developers to start working on the new system very quickly, around a year before the full sys-

tem is available. OS5, the real Amiga OS, runs on the new "superchip" which is not Intel - Intel processors are inferior and far more expensive. Nothing Intel is working on really suits the needs of the Amiga, and the guys at Amiga Inc are perfectly aware of this.

Why are the development systems x86? Why not 68k or PPC? I don't understand the need to drag us into Intel territory, even for only a year.

Look, this really is an issue blown out of all proportions. Unless you are a developer, you don't really need the new system, although the Amiga side of it should be powerful enough to be very tempting. In which case you can regard the x86 as a slave CPU good only for controlling the PCI interface and possibly running the odd PC game. The notion of cross platform development is hardly a new one for the Amiga anyway - the Amiga originally had SUN development systems, and in the days of big business programming, many coders used Amiga/PC devel-

opment systems taking advantage of the Amiga's ROMWHACK debugging features.

So this new Amiga - it's going to be a set top box, right? I mean they say otherwise, but all that talk of digital convergence makes it pretty clear that's what they mean.

No. The whole point of the digital convergence philosophy is that the hardware and software will be appropriate for a wide variety of applications. Amiga OS5 will be developed in a modular fashion which will allow a number of different "flavours" of front end to be developed with the end application in mind, which may well include set top box.

However, the top level of the OS will be a sophisticated desktop computer environment - you have to work to the top level to cover all the bases for lower specification versions. Although Amiga Inc. wants to produce a system highly appropriate STB use, their reference designs will be for home computers.



■ Concept design for one possible layout of Amiga154

Amiga systems as well as upcoming designs in what is rapidly becoming known as the "Amiga Classic" line, and may be ported to PPC.

Eventually, OS5 machines will come out and at the moment, at least, everyone seems keen on the notion of OS5 being ported to PPC. Due to the way the new OS is programmed to, there would be a very high level of compatibility between the PPC and Superchip versions.

For my money...

Here are a number of models of Amiga on the way, and if you think it's getting confusing, you should see what it's like buying a PC or a Mac. CU Amiga will be bringing you the low down on all the new systems as they arrive. The principle question people are asking is "should I wait?" The answer is

no. The fact is that even if Amiga Inc hit all their targets, the new machine is 2 years away, and it will be a while after that before it picks up. If you are willing to wait up to 3 years, then what happens when the time comes? There will no doubt be something else marvellous in another 3 years: do you wait for that? 3 years is a long time in computing. In 1995 the 486 was king of the PC hill, yet

today they are considered ancient machines. If you only have to update your Amiga every 3 years you're doing very well!

If you want your Amiga to get any faster



▲ Concept for another AmigaOS "flavour" that might be more appropriate in a netting box.

► Microsoft's Mac OS SafeItt version system.



in the next 2-3 years, that means PPC. You'll need it if you want to play more advanced games or run more powerful applications.

If you are happy with your current machine, a PowerUP card seems the best plan, while if you are after a whole new system, a BoXaR or PieBox or whatever DCE/Power do will be the answer. If you need PC/Alpha integration, get a Siamese PCI. In a couple of years look for our review of the first of the Future Amiga systems, but until then Amiga Classic certainly has a lot of life left in it! ■

Andrew Koin

Superchip shouldn't that be vapourchip? It sounds pretty hot, but will it really happen? Even if it does happen, is there any reason to think it will be more than hype?

Well no one wants to count their chips before they're silicon, but our understanding is that this is in a rather better position than most. The development is apparently very well progressed, and enough money has been pumped into it to be confident that the investors aren't going to let it fall apart now.

As for hype? Yes, of course there is an element of hype involved. The superchip is not the only piece of revolutionary silicon architecture that is planned for this time frame, and at the moment there is no reason to assume that it will be any better than some other things out there. The critical point about it is that the Amiga will be adopting it as a core technology from the word go, and the operating system will be designed to take these next generation functions into account.

Other people will have similar hardware, but no-one else will have the dedicated computer system that will allow the hardware to be used to its fullest. The other platforms retain a legacy of older architecture which holds them right back, either in terms of power or cost, there is every reason to be confident that Amiga Inc are on to a winner.

Someone suggested that the chip was Power X, someone else suggested it was Transmeta.

I'm certain it is not Project X and almost certain it is not Transmeta. For a start, both these are far too well known!

The Superchip: who's actually making it?

As far as we can figure out from the hints and snippets, it is a company, or a subsidiary unit, or an investment combined set up for the specific purpose of making a chip to meet the needs of future computing. We suspect that it is

backed financially by a number of companies with a strong interest in this line of developments, perhaps not companies not normally associated with CPU manufacture.

We have been told that they have been working for some time on this and have a good number of very skilled staff on the project. As for any names or places, you know as much as we do.

Is it really a can tell me, I won't say.

No, really, we don't know.

Will the new Amiga run old Amiga software?

Yes, but it is not quite clear how yet. It could be a software emulator along the lines of UAE, which should run pretty well on a future Amiga (the nature of the superchip makes it very good at emulation, or it may be transparent, as 68k emulation is on PPC Macintoshes. The latter would certainly be preferable.

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Video Toaster Pops Up Again

It sparked a desktop video revolution in America but never made an impact east of Boston. However, with prices lower than ever, NewTek's Video Toaster now looks a very attractive prospect for all of us.

It's the card that started the 'desktop video movement'. It's the card that made entire rooms full of TV equipment look overblown, overpriced, and out of date. It's the card that put the Amiga on the map in the US. However, while in the States, the Video Toaster has been the Amiga's lifelong business buddy, to most non-American Amigas it's a complete stranger. NowTek's recent price cuts could mean that it's soon to find a lot more friends across the globe.

If you've never seen or used a Toaster, you've probably been fobbed off with a vague description of it along the lines of "it does video". OK, but you'll probably want to know exactly what it "does". To video. In a nutshell, it's a video card that acts as a real-time multiple input switcher, wiper effects generator, genlock, keyer, mixer and titler and it does all of this at broadcast TV quality.

The trouble is that it has the rather marked flaw of being designed to work only with the North American/Japanese NTSC video standard, which explains why the rest of the world hasn't got in on the act. The explanations for why there has never been a PAL Toaster vary wildly but the story seems to revolve around two critical details. For starters, the Toaster relies rather heavily on a video processing chip which is unavailable in PAL format. But even more importantly the Toaster works its magic with a lot of fiddly and quite which relies on the charac-



teristics of NTSC which do not exist in PAL. While there certainly may be PAL tricks which don't exist for NTSC, nobody has explored these in the same way NewTek has with their Toaster. So, the bottom line remains, if you want to Toast, you have to do it in NTSC.

Of course, NTSC and PAL are not insurmountable barriers - in evidence because PAL countries can watch Friends and Americans can watch Doctor Who. But because of the hassle and expense, relatively few people have dared to wonder about using a Toaster in Europe. Today, however, with video equipment in general and the Toaster in particular dropping rapidly in price, it may be time to take a close look at the crowded little wonder card from Kansas.

The Toaster revealed

So, other than generating a market for this party add ons with unfortunate names (Marmalade, The Toaster Oven et al) what the fuss all about? What does a Toaster do that might be remotely interesting to a serious video producer, let alone the average dabbler?

The Toaster itself is a monstrous card that fits in the video slot of any suitably equipped Amiga. It has a few 'sandwich' boards, making it a very large and heavy thing indeed. In most Amigas (such as 3000s, 4000s, 4000Ts, and most tower or versions) the sheer size of the board bloc-

Box of tricks

The core of the Video Toaster is the 'switcher', which essentially replicates a television switching board. The incoming video from the four inputs can be routed directly through, switched instantaneously from one to another, or 'A/B rolled' using one of hundreds of effects. The applications are as simple as using the quick-switch abilities to run a talk show or newscast-style production with two or three cameras set up across a studio, to using the Toaster to switch live between a camera and an AV device (like a VCR, a laserdisc, or a computer) for presentations and instructional videos. All of the functions can be mouse or keyboard driven – at one point, stickers were available to paste over every single key to show each function at a glance, giving serious Toasters nears easily identifiable rainbow keyboards.

When the talk show or news ends, the Toaster has a built-in character generator which can be used to roll the credits. If this sounds like a minor point, many Toasters were sold exclusively to replace dedicated character generators which themselves cost thousands of dollars.

The applications for using a Toaster live are enormous. Many small TV stations and public access cable centres base their entire studios around Toasters, to do everything from the news to transitions between programs and commercials and back again. They are also used in the production of the commercials themselves. But you don't have to be on television or videotape to appreciate the capabilities. Stage performances with visual aids have put the Toaster to work – a recent 'biopic' on the first American film star (and sex scandal perpetrator) Fatty Arbuckle made extensive use of the Toaster to show film clips and headlines on a projected screen while the performers told the story.



One of the Toaster's transitional effects is action. A simple animation becomes a vibrant, abstract way of switching from one video channel to another.

a second slot. From the outside, you'd hardly notice anything unusual – six BNC style connectors poke out from the backplate. Four are for video inputs, another is the main (out) display, and the last is used as the preview monitor. Since visual effects typically involve some sort of transition from one image to another, preview helps the image you will be moving to.

The Video Toaster comes in two flavours – the original, and the Video Toaster 4000. The significant difference is that the 4000 version takes advantage of AGA, allowing for more colourful effects and animations. It also is the best way to use the Flyer editing board. And since it was designed after the release of the A3000 and A4000, unlike the original, it is better suited for fitting in more types of machines – stones are legendary of the hassles of fitting an original Toaster in any machine other than a 2000, simply because they don't have the generous amount of internal space available to 2000 users. Speed and memory requirements vary depending on your patience level and how much work you need the Toaster to do – an 040 and 16MB of memory, along with a good-sized hard drive to store lots of animated effects, is considered a very well equipped Toaster workstation.

As seen on TV

The Toaster is well equipped for live broadcast, closed circuit, or live-to-tape productions (with little or no editing after the fact). But it can also be used to create stand-alone special effects – one of the classic demonstrations involves using the Toaster's 'static fuzz' transition to beam objects in and out from a live video image. The trick takes just a few seconds to prepare, and while it won't be mistaken for the effects being produced at Industrial Light and Magic these days, it's just one example of the power that has been placed inside a humble desktop computer. For those results, firing up LightWave is the answer. Now that LightWave has been sold in standalone versions (and for other platforms) for so many years, some have lost track of the fact that for years, LightWave required a Toaster.

Other switcher effects are perhaps not so practical. Such as the cows which fall from the sky and pile up, obscuring the image until they fly off, revealing the new one. With special software, new transitions can be created, and the results are so impressive that it's been used, quite often, on

broadcast TV. The long-running Home Improvement used the Toaster for its custom transitions (usually at least two or three per episode).

To round out the package, the software includes a paint program, and a mode called ChromaFX typically used to generate wacky colour-cycling effects, good for anything from DJs to budget ad producers. The paint program, Toastpaint is essentially just a HAM paint program and is not very



"A DEFINITE MUST-HAVE UPGRADE FOR EVERY SERIOUS TOASTER USER!"
Find Out Why!

▲ The best advert for Toaster – what its users have achieved

well respected – fortunately, you can also incorporate graphics created in other programs as long as they have been converted to the Toaster's Framestore format, which many image processors will do for you.

Like a real studio, the Toaster also provides an entry point for other video technology. For example, out of the box the Toaster provides 'luminance keying' (which is a more primitive version of the blue screen (or chrominance keying) used for so many special effects). With a relatively inexpensive add-on box, the Toaster gains quite respectable blue screen capability. Third-party manufacturers who have designed

NTSC vs. PAL

Video is a very technical medium. There is so much going on beyond what you see on the telly that it gets to be mind-boggling if you really start to break down the science of it. But because the Amiga was built so intimately in tune with video, many of us have at least a basic grasp of the differences.

The most important differences between NTSC and PAL are a question of resolution vs. refresh rate. In NTSC countries (primarily the Americas and Japan), video refreshes at 60 Hz (cycles per second) versus 50 Hz in PAL countries. The trade off is resolution – PAL's is somewhat finer. Of course, in these home countries these formats look perfectly natural to the natives, but overseas travellers sometimes claim they can see a difference. The difference is more pronounced when using a PAL monitor to display NTSC or vice-versa: for example, in the US, displaying PAL results in a rather pronounced flicker

complementary video products can add their controls directly to the Toaster's own interface screen. And then there's the Video Toaster Flyer.

Price drops

Recently, Toaster systems have begun to sell for vastly reduced prices. The original Video Toaster card was introduced at over US\$2500 (roughly £1500). The original Flyer price was US\$4000 (roughly £2500), and that of course excluded the actual Amiga, plus video-grade hard drives for the Flyer. Now, NewTek offers packages based on an A4000T, plus Toaster and Flyer cards for US\$5000 (£3100) all told. Video drives for the Flyer are still your own lookout, but the savings are still tremendous, and of course hard drive prices tend to continue steadily

downward in price-per-megabyte for in this case, gigabyte).

This has also created a lot of pressure on the rather active used market for Toasters and related gear. An original Video Toaster has been known to sell for just over £200. This has allowed all sorts of people who could only dream of one day owning a Toaster to take the plunge and have one in their home. At that sort of price, if you're interested in experimenting with video, it suddenly becomes very tempting.



The Flyer

The Flyer was NewTek's attempt to do for video editing what they had already done for live broadcast - make it cheap, good, and on a single card you can plunk into an Amiga. As much as the Toaster can do, if you want to create a complete production, involving lots of footage shot over many days in many locations, it can't help you put it all together, even though its switching and effects probably came in handy while you recorded all that tape.

Putting it together in a seamless, attractive manner is another story. Traditional editing consists of multiple video tape machines, which are run through dedicated editing and effects consoles. The consoles can stop or roll your various tapes of footage on command and on the fly write the 'program' (final product) tape records. Because videotape is a linear medium, this can be a tedious process. The Flyer, like other nonlinear editors, allows you to digitise all of your recordings onto the computer, and then chop it all up and reassemble it in whatever style you choose before outputting your final product. In the computer, videographers get the same luxury film editors have always had - they can literally tear their work apart frame by frame and reassemble it, but until computers and products like the Flyer came along, there was no way to break video out of the streams of tape. And just like that, the desktop TV station turned into the desktop TV station plus editing facility. All you do is put some high-grade high-storage hard drives on the Flyer bus, and you're ready to make serious stuff.



Technical considerations

There are other considerations to make. Video, like most creative media, is the sort of pursuit where you can spend as much money as you have and still not have 'enough stuff'. Without a video source and a place to record your video, you have very little to work with, unless you plan to use it solely with computer graphics to some sort of live video output, like an LCD projector or monitor. This is fine, but an underuse of the Toaster's abilities.

When you start feeding multiple video signals to the Toaster, it's necessary to make sure they all arrive at the same time. The precise technical explanation for this issue (known as video sync) is beyond this article, but it suffices to say that devices known as time base correctors (TBCs) take care of this problem for you. The quality of these units varies widely as does the price - you could spend £100 or less, or well over £1000 for professional grade units. For most purposes, though, lower end TBCs serve just fine.

The quality of your input and output does matter. Using regular VHS tape to go in and out is not going to be pleasing to the eye. With each component your video moves through, the signal depletes, so it's best to try to at least begin with good quality video. For early experimentation, VHS is as good as anything, but you won't get gorgeous results.

What you'll need

None of this matters unless you get around the problem of the Toaster not being a PAL device. But it's well known that Toasters are in use all over Europe and beyond - one American dealer distinctly remembers putting together a Toaster/Flyer package for a member of the royal family of Oman. Because it is something of an underground effort and not without certain disadvantages and extra expense, using a Toaster in Europe is not an exact science, but with the

help of Chuck Baker and John Fletcher of NewTek and Dan Sorenson of Blackamas Computers, here is a thumbnail sketch of what you need if you want to get started.

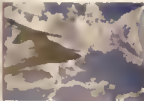
- A video-slot equipped Amiga system. This means a 2000, 3000, 4000, 4000T or an At200 with tower busboard that includes a full video slot implementation. The BoXaR motherboard should also suffice, as it is being earmarked for Toaster sales in the US.

- A 115/120 volt, 60Hz power supply for the Amiga system. Most modern PC power supplies come with a little slider switch which toggles between European and American power standards. If your system does not have one, you will need to replace yours.



- A heavy-duty (1000 watt or better is recommended) power converter to power your new 115V Amiga. To give you an idea what sort of expense you can expect, Mr. Sorenson, who used his Toaster while living in Germany, bought a 2000 watt model from a pawn shop for around £50.

- Either of these items, an NTSC 1084 monitor or a device known as a Sync Strainer. The Video Toaster relies on a color signal to be provided through the RGB of your Amiga in order to properly mix the signal. That signal can be found on a 1084 monitor or can be provided by the aforementioned Sync Strainer which is a special little box that will set you back about £30. The Strainer was originally intended for Americans who did not use 1084 monitors.



may need multiple units – one (or more) for incoming video, one for outgoing video. Once again, the expense will largely be dictated by your willingness to pay and your concern for quality. Mr. Sorenson recommends serious PAL Toaster users consider the Passport 4000, a high quality transcoder from Prime Image. Prime Image can be contacted on +1 408-867-6519.

- A Y/C Plus or similar board (optional). The Toaster's inputs and outputs are composite video, which is not nearly the best quality in the world. The Toaster can be upgraded to support superior S-Video with the Y/C Plus card. Because each additional component in a video chain degrades the signal, and transcoders are so important, that signal quality will get worse even faster. Using Y/C Plus and S-Video sources means



▲ ToasterPoint in action.

ter become involved in a local film or video community – like many professional and cre-

- Had multisyncs instead (which do not provide the required signal) but they will serve until as well overseas and will certainly be much cheaper to have shipped. A regular PAL 1084 will not suffice, because the timing signal would be wrong. Of course, if you go with the NTSC 1084 you will need to power it through the power converter as well.

- A PAL/NTSC transcoding device (optional, but highly recommended). This is probably the single greatest expense you will have to make that a North American doesn't. The transcoder will have to convert all of your incoming PAL signals (from video cameras, source tape, etc.) into NTSC, and then back into PAL for recording. Depending on what model you choose to invest in, you

there is more room to give in the video signal. Unfortunately, this is an additional expense, and S-Video transcoders are similarly likely to be more expensive, but if quality is the goal this should be a serious consideration.

Alternatively...

You can still do some work to tape without any transcoders at all, or at least with one fewer. The alternative would be to purchase an NTSC VCR from overseas, plug it into the power converter, and use it as the record deck. That doesn't solve the problem of inputs – you can always use the computer graphic outputs, of course, but any camera or tape inputs still need to be converted to NTSC by a transcoder. But by recording to an NTSC VCR, you can use that for viewing on a suitable monitor, or perhaps even easier, play it on one of the growing number of consumer PAL VCRs which support NTSC playback.

Professionals tend to upgrade their video equipment at a fairly rapid rate. If you're really interested in the field but have a tight budget to work with, it would be worth your while to enquire of several video production firms or broadcast facilities how they dispose of their disused gear. Even bet-

ter, become involved in a local film or video community – like many professional and creative endeavors, one video person tends to know someone who knows everyone else and by making a few contacts in key places you might be let in on an equipment firesale before anyone else. A good many Toaster studios have been built from castoff pieces of larger video firms.

Getting into video is a serious investment no matter how you do it. Using a Toaster outside its native land does create some additional headaches and expense. There's no way around that. On the other hand, there's simply no substitute. You can buy standalone switchers and effects machines, or try to replicate some of the functionality of the Toaster with software like Scale, Monument Designer, or X-DVE.

All of these programs are very capable (and each does a few tasks better than the Toaster would), but none of them offers the unique combination of power at your fingertips as the Video Toaster. Headaches and all, if you're a frustrated genius with a story you're just dying to tell on the small screen, investigating the Video Toaster would be a smart move. ■

Jesse Compton



▲ The video switcher control panel – check out these crazy effects.

Contact NewTek

To find out more contact NewTek on the numbers below or visit their web site at www.uswtek.com
 Tel + 1 210 370 8000
 (from US) 800 862 7837
 Fax + 1 210 370 8002
 email: customer_service@newtek.com

Audio Magic

You'll be amazed at what your Amiga can do when it comes to sound. It's true! There's virtually no computer-controlled audio process that's beyond your Amiga, and it needn't cost the Earth. Allow Tony Horgan and Rhomes Trann to convince you...

Think of Amiga audio and what springs to mind? An underpowered 8-bit sound chip? A "Techno Tragedy" case that lost out to the Atari ST because it didn't have MIDI ports built in? A nice idea but hopelessly out of touch and out of date? A joke compared to "professional" PC and Mac audio systems? If so, you need a serious update on the situation! Things have changed a lot in recent years, and 1996 has seen things progressing at a faster rate than ever before. So the pendulum for a selection of amazing audio tests that can be performed.

Of course you can still do everything you could before, including a limitless array of slightly more obscure and specialised applications (sound effects for theatrical productions, on-the-fly sampling for DJs, stand-alone real-time effects processing, editing suite for outboard samplers, multi-media CD audio production...).

Even if you don't have a Zorro equipped Amiga yet, in the very near future you'll be able to do all of this from a bog standard A1200!

Add a fast SCSI controller, preferably via an accelerator, plus the forthcoming Melody1200 sound card (which plugs into the clock connector on the motherboard) and you're away! Better still, go for Zorro and all the wonders of professional digital audio will be yours.

Over the following pages

you'll find a round-up

of all the most exciting new audio developments afoot, a few bits and pieces that have been lurking in the shadows for a while. To get you up to speed, let's take a look at what's been happening over the last couple of years.

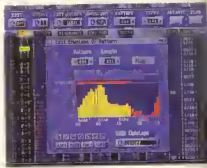
Overcoming old limits

Four mono (or two stereo) channels of 8-bit audio can produce good results, but these days those specifications are laughably low.

They are imposed by the Amiga's standard sound chip known as Paula. One way or another, the Amiga's inventive community of hardware and software developers have bashed these limits to the pages of history. Thanks to some clever trickery you can get 14-bit output from Paula with most audio software, while 16-bit audio is available via a range of sound card expansions.

The four channel limit is now obsolete due to a new approach to replaying audio. These days any decent bit of audio software either has direct support for sound cards or uses AHI (Audio Hardware Interface) which is a bit of software that redirects the program's sound to your chosen sound card. To take Octamed SoundStudio as an example, instead of using Paula and the standard Amiga hardware (lucrative for replaying sound samples), it does all of the sound processing itself, which includes the moving of a theoretically unlimited number of tracks, and finally passes a single stereo audio stream to the sound card or the Amiga's internal Paula sound chip.

Most Amiga sound cards are quite simple. For example, Toccata does nothing more than play and record 16-bit stereo or mono audio at one of a number of rates up to and above that of CD audio. Some have their own unique features, such as Delfina which can add echo and distortion effects while it plays and records. However, because the only thing they all have in common is the ability to record and playback 16-bit audio, in order to use the additional functions you need software written specifically for the card, which tends to be





quite scarce. An AHI driver is available for most sound cards which is enough to make them available as a 16-bit input and output for any software with AHI support.

One of the most powerful upshots of this new method of replaying audio is that the final digital audio stream can be directed to a hard drive as well as a sound card. That means you can record direct to a hard drive (or other media such as Jaz cartridges), negating the need for a DAT or any other type of conventional recorder. You can then write an audio CD from the resulting hard drive file. This kind of hard drive recording is available via AHI, OctaMED, SoundStudio and a few other SoundStudio-type trackers.

Introducing CD-R

Another of the most exciting advances concerns CD-R recordable CDs. Just a couple of years ago the thought of selling up a CD writing system would have been your wallet running for cover. The drives were expensive and so were the blank discs. Not only that, but the software

was at a stage that

required you to shell out for a major

and £2 depending on the size of your order). In addition, there's no need to have a second SCSI hard drive into which to build your CD image before burning it to the actual CD. The software has advanced to allow CDs to be burned direct from the original files.

At the same time, hard drive recording and editing software has come on tremendously. Take a look at SampleTime and Sound Probe on this month's cover disks and you'll be very pleasantly surprised. For example, SampleTime can now save out an entire CD's worth of audio as an AIFF file which includes embedded track markers. You could, for example, record a 70 minute continuous DJ mix to hard drive with SampleTime, add track markers, save it and copy it direct to an audio CD, even fixing up your mistakes along the way.

Multitasking master

Never forget that your Amiga is an expert when it comes to smooth multitasking. For example, with a decent CPU (preferably an '686) you can comfortably have one program sequencing a bunch of MIDI devices while another program acts as a real time effects processor, adding all kinds of

amount of SCSI hard drive capacity too. Things have changed in a few ways most obviously and predictably, the price of CD-R drives has fallen dramatically and so has the cost of the discs themselves (now available for between £1

Try this for size

Thanks to recent developments you can now do all at the following and more:

- Compress, record and master a complete record to CD with no outboard mixers, effects units, keyboards or recorders at all
- Digitally edit a completely seamless CD album and burn it in one go complete with track markers
- Use your Amiga as a MIDI sequencer and 16-bit hard disk recorder or realtime effects unit at the same time
- Emulate thousands of pounds worth of classic discontinued analogue synths and drum machines
- Process any sound with just about any analogue special effect ever devised, including all the latest lads and favourites
- Convert and use virtually every type of sound file in existence and copy sounds direct from normal audio CDs

effects to any one or all of your external MIDI instruments. Alternatively you could set yourself up with a MIDI sequencer controlling your MIDI instruments, pass them all through a mixer and into a sound card, and have SampleTime record it all to hard drive in CD quality stereo.

If you have a sound card, you actually have two independent audio outputs (the sound card and Paula), each of which can be controlled by different programs at the same time. The use of your internal Paula sound chip puts virtually no strain on the computer's CPU as long as you don't use 'mixing' techniques) so using it in conjunction with a sound card won't slow things down. Put your mind to it, experiment and you'll come up with schemes and ideas you never thought possible.

Save money

Your Amiga can also save you a lot of cash. For instance, classic analogue synths can fetch silly prices on the second hand market, and often won't integrate smoothly into your MIDI setup. With 'softsynths' like the forthcoming 303Tracker, you can have a virtual analogue synth on your Amiga that outputs totally clean samples ready for you to use in your preferred sequencer or tracker.

Basically, when it comes to audio, if there's something you've seen done on any other computer, it's almost certain you can do it with your Amiga, normally for a fraction of the cost and always in a far superior environment.

Samplers & Sequencers

The core of your music making set-up is going to be either a sampler and a tracker or a MIDI sequencer. Here are some of the best...

When it comes to making music from scratch you've got two choices. You can either use a sample-based tracker-type program in conjunction with a sample editor or take the MIDI sequencing route. Both

have their advantages and limitations. With MIDI of course you'll need to splash out on some external MIDI sound modules and preferably a keyboard. This allows you to expand your system as far as your budget will take you but isn't the cheapest way of making music. We've not gone into detail on the subject of MIDI and outboard MIDI equipment as that's really a whole separate issue in itself and it would be impossible to cover even a small percentage of the available MIDI instruments you could use.

However, take a look at the MIDI sequencers panel for a list of what's available on the software front. Generally MIDI and Amiga sampling don't go together too well. This isn't for any particular technical reason (any Amiga can play samples and send MIDI information at the same time) but merely due to the focus of the developers. Tracker developers tend to disregard MIDI functions and MIDI sequencer developers treat 8-bit Amiga samples with con-

tempt. Most MIDI sequencers were developed well before advances were made in 16-bit Amiga audio, so there's nothing much going on with that combination either. There are exceptions to the rule, however, such as OctaMED SoundStudio which incorporates MIDI sequencing seamlessly into its sample tracking.

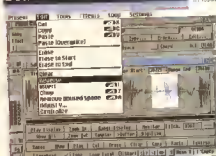
Other trackers of note include variants on the original SoundTracker, such as ProTracker. This is now looking very flaking and dated, limited to four channel 8-bit output in most cases. These are remnants of the old school of Amiga audio - the day's we're trying to move away from now. More interesting is SoundBlaster, which takes the tracker idea but advances it in a similar manner to SoundStudio. It offers a window-based interface that desperately needs some order, but anything has to be better than the system-hostile control panels of the old ProTrackers. It also offers mixed out-

put featuring realtime effects processing.

Sequencers

MIDI sequencers haven't exactly come on in leaps and bounds in recent years, although that doesn't really matter all that much. At heart a MIDI sequencer is a very simple thing. It 'listens' to the MIDI interface plugged into your serial port and

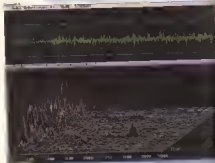
OctaMED SoundStudio



OctaMED transcended the tracker genre from which it emerged many moons ago. Now it's out there in a league of its own, although it's been in a state of hibernation for a couple of years now. It does have a few rivals snapping at its heels, but still it's direct support for most common Zorro sound cards and its multi-track mixing abilities make it the first choice for anyone who wants to stick with tracker-style editing but wants more power, flexibility and the chance to be rid of 8-bit samples. Unfortunately its disappointing sales have led its original development team to move on to the PC, but in the true spirit of the Amiga, it has been picked up by a new developer that is currently working on a version 2 release. This will include direct support for the Melody and Melody 1200 sound cards, which also happen to be developed by the same people. Version 1 is available for next to nothing on CD from Wierd Science and was included on the March 97 issue of CU Amiga.

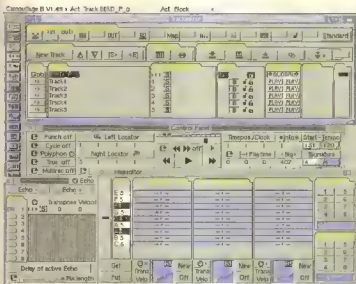
SoundFX

SoundFX is probably the best shareware digital audio processor for the Amiga. It includes over 50 effects (everything from echo to surround



sound encoding). All functions have extensive parameter and modulation options and the capability to save/load effect configurations.

An extensive ARxx command set gives you almost complete control over this application, with the ability to automate functions or even create custom effects. Support is included for all common audio file formats and many unusual ones, too. Audio output is possible through the Amiga's built-in audio hardware (with 8 and 16-bit implementations) or using the AHI system.



Studio 16

Studio 16 was the first serious audio hard disk recording system to appeal for the Amiga. It features a powerful time line editor which not only triggers audio samples but can also control external programs through ARexx, making it a full multimedia system. Its frame accurate timing and ability to sync to SMPTE time code make it perfect for video/film projects. It is capable of playing up to 6 tracks (AD516) or 4 tracks (AD1012) at 44.1 kHz, with simultaneous record and playback. The software has not been officially updated since 1994. However, due to the recent surfacing of some long lost developer documentation, the program has been getting some new attention and the hope of some new enhanced modules in the future. Related QMaster (cuefile file manager), Studio16add (developer documentation and add-on tools), Studio16-Dev (v2.06 developer documentation), SuperModel (GUI patch) and the Studio 16 support website (FAQ, email list, files).

record notes, volumes and other performance data transmitted by your keyboard onto a timeline. You can then move this data around the timeline, add new tracks over the top, and then get the sequence to send all the information back to your MIDI instruments. There, that wasn't difficult was it? There have been a few developments since Dominator and Camouflage! and aside from that you're looking at software that stopped in its tracks some years ago. One of the less impressive examples that was doing the rounds a while ago has since reappeared for free download via the web. Sequencer One is now available for free by way of a promotion for Sequencer One Plus. If you've got web access you've got nothing to lose by taking a look.

Bars & Pipes Pro

Bars and Pipes Professional is the most powerful MIDI sequencer available for the

Amiga. Its interface is a bit different, but once you get used to it, it presents many creative possibilities that are unavailable with similar programs. Although B&P Pro was abandoned during the Microsoft takeover, the availability of developer documentation leaves it open for further expansion. With it now being freely distributable it is an application that every Amiga musician should have. Related: websites (Mediam Plumbing and Richard Hagens B&P), an email list and the Trope Play Plus (48 channel MIDI interface).

Music-X

Before B&P Pro came along, Music-X was the best MIDI sequencer available. The addition of an ARexx module opened up lots of new possibilities for creative MIDI message processing. Music-X provides for additional MIDI channels (>16) through custom drivers, however most of the support

hardware is difficult if not impossible to find. Related: Music-X Macros, MusicXMagic and MusicXReaxMacros.

Camouflage

Camouflage is a promising looking alternative for MIDI sequencing which seems to be on the right track. But, it appears that with no updates for over 2 years and unreachable web and email addresses, that this project may have been abandoned.

Dominator

The author of Dominator, Luc De Pauw, has moved on from the Amiga, but will be releasing one final update that adds AHI support and event editing. It will appear on his website in early July and will also include a free key file. He is looking for someone to take over the development, so if you are interested get in touch with him.

ProStation

The soon to be released ProStation promises to usher in a new era for digital audio processing on the Amiga. Directed at high-end Amiga audio professionals, this digital recording/processing system will combine all the best features of existing Amiga software (multi-track, graphic time-line editing, graphic mixing, high quality effects processing, ARexx, B&P synchronization, greater than CD quality) with that of more advanced Mac/PC audio applications. This program is sure to create some excitement in the Amiga music community and we'll be first with the news, so watch here for a full preview of this great new Amiga offering.

Where to get them

Bars & Pipes Professional - Blue Ribbon Soundworks - \$ Free
http://members.theglobe.com/geoin/
http://www.in2net.com/bws/blue
Bars & Pipes Professional Support Site
http://www.execulink.com/~rachel/b&p/
Camouflage - I S M - DM 139
amnet: mus/midi/camouflage149E.lha
Dominator - Luc De Pauw - \$ FreeWare
http://www.ping.be/tavares/gaden/
email: Luc De Pauw @ping.be
amnet: mus/midi/dominatorV1.51.lha
Music-X - Hollywood/MicroIllusions - \$ Discontinued
Music-X Macros - Gareth R. Craft - \$ FreeWare
http://www.midi.craft.demon.co.uk/~craftbro

email: craftbro@midicraft.demon.co.uk
amnet: mus/midi/Music-X_Macros.lha
ProStation - Audiolabs - \$ TBA
http://www.audiolabs.it
email: info@audiolabs.it
SoundFX - Stefan Kost - £20 US\$30
http://www.imm.hrwk-leipzig.de/~kost/SoundFX.html
email: kost@imm.hrwk-leipzig.de
Studio 16 - SunRise Industries - \$ Discontinued
Studio16add - Kenneth Nilsen - \$ FreeWare
email: kenny@ognett.no
amnet: dawlmsc/Studio16add.lha
SoundStudio - Weird Science
Tel: 0116 248 3800
Sequencer One
Software Technology Ltd
http://www.software-technology.com



Tools & Other Bits

You won't get by with just one major music application. Sometimes you just have to reach into your tool bag...

No one piece of software is going to do all the jobs you always want it to. Sometimes you might find you've got an alien file format that won't load directly into your preferred workstation application. Whatever it is you do, it's likely that at least at one time or another you'll be glad you got some of this stuff at your disposal.

Sound file converters

AmuSOX is the Swiss Army Knife of sound file conversion. It supports most of the common formats as well as some more unusual ones. If you have a sound file to convert this is the first program to look at. It can also perform some simple digital processing functions.

If you want to convert audio files for writing to CD or for use on the Flyer, Audio Thunder is the answer. In addition to conversion, it also provides basic cut/paste/ effect and auditioning functions. A time sequencing editor, for merging multiple audio clips into a single clip, is also included.

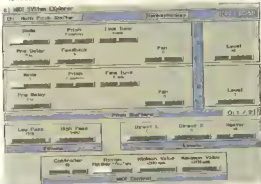
MPEG audio is becoming a very popular music format because of its high compression, though unfortunately, it is mostly being used for music piracy. The encoding process can take a long time, so a fast machine is recommended. However, either mp3enc or the newer flac mp3 should do the job nicely regardless of your system speed. No known Amiga applications will load RealAudio sound files, but most can load something in raw format. The tool to make this conversion is RA.

Sample players

At the top of this list is Play16, providing support for most popular sound formats up to 16 bit at 66 kHz in stereo. It supports playback through the Amiga's built-in hardware (Paula), AHI and the MaestroPro and Prelude sound cards. For low memory conditions or large sound files, Play16 can even perform real-time play from hard disk. It also works well in conjunction with RA to play RealAudio files.

If you want to play the popular MPEG-3 song files that proliferate the internet, AmigaAMP (formerly MPEGAMI) is the program to use. If you do not like the Amiga

gadgets, it will load WinAMP compatible "skins" for a nice but slow-loading 266 color interface. AmigaAMP is capable of doing real-time decoding on an O60 at 90 MHz or at half the sampling rate on an O40 at 40 MHz. PPC users will enjoy additional functions.



The problem with MIDI song files is that the only people who can listen to them is other MIDI musicians. Even those people will not hear the song properly if they do not own similar sound modules. GMPlay is a virtual GM module that substitutes MIDI channel notes for hard disk sample triggering. The distribution includes many GM standard sounds, but if they are not to your liking, there are several alternative archives available. You can also use your own custom sounds, so non-GM compositions can also be played or arranged.

MIDI Tools

With many MIDI setups, it becomes more and more difficult to organize the ever-growing accumulation of MIDI data files. One possible solution is a MIDI librarian like Patchmaster. Designed to be used as a stand-alone program or a B&B Pro add-on, it covers many of the basic needs of a librarian. However, with no available documentation and some dead-end limitations, it is not the final solution. But, being one of the Blue Ribbon freebies, it is worth having a look.

Another option is an upcoming program called MSE Snapshot. With it, you simply define a project (song) and assign MIDI

devices to it. Then, with a click of a button, MSE Snapshot will retrieve all MIDI data from the associated devices. To recreate the song setup, select an existing project and let the program do all the work for you.

With so many different user interfaces on musical devices it can become very confusing to edit sounds. What would help is a common interface for all devices. The solution is the "Universal Patch Editor" (UPE), a great idea, but the reality is that with so many different and changing MIDI implementations the UPE is a myth.

A more realistic solution is MIDI SYSTEM Explorer (MSE). It does not claim to be a UPE, but does solve some of the problems. It comes with everything you need to create your own fully customized MIDI control systems. To create device-specific modules, MSE uses

special definition language that even non-programmers should find easy to use. With it, you can customize almost everything, including screens, windows, fonts, colors, graphics and gadgets. MSE can control all kinds of MIDI data, so it can be used for almost any MIDI control applications, including patch editing, mixing, lighting and lesser displays.

CD-R software



There are a number of capable CD writing packages available these days. Take a look in on this month's cover CD for a very capable version of MakeCD, MasterISO and BurnIt and also names to look out for.

er Hardware

Updating your audio hardware is now a realistic and practical option thanks to widespread software support for the growing range of sound cards.

Whether through AHI or direct software support, there are now many ways you can make use of a sound card expansion with your favourite audio software. The days of sound cards being tied to their own software are gone, leaving you free to mix and match pretty much as you see fit. Here's a round-up of the major contenders.

Tocatta

You can find one, a Tocatta card will give you a good quality 16-bit input and output that's well served by AHI, SampleStudio and OctaMED. SoundStudio. Availability of these cards seems to have dried up recently so your best bet is probably to keep an eye on second-hand ads. It was originally on sale for £299 which was a lot of money to ask for a basic 16-bit DA-AD card, but if you can get a good price you'll not have any complaints.

Maestro Pro

The Maestro Pro is a fully digital audio card. It includes one digital input (selectable optical or coaxial) and one digital output (optical). Do not let the coaxial input fool you, although it is an RCA connector it will not work with analog device outputs (synth, cassette player, etc.). It is capable of operating at 48 kHz (internal sync) and at 32/44.1 kHz (external sync).

Why would you want one? One of the problems with sampler cards is that they are subjected to all kinds of computer interference, which can add noise to your recordings. A better alternative is to use an external digital recorder (such as DAT) to record analog signals and then transfer them digitally to the Amiga using this card. You could directly transfer sounds/songs from a CD/fasterisc player or other device that has a digital output without any loss of

quality. It can also be used to remove SCMS copy protection from DAT recordings. As an audio output card (AHI) it is capable of better than CD quality output.

Melody

There are a few variants of the Melody sound card due for release later this year. The most interesting is the A1200 version which is attached to the clock connector on the motherboard (didn't know you had one of those did you?). Details are sketchy at the moment but it could be the one worthwhile alternative to converting your A1200 into a Zorro lower.

AD1012/AD516

The AD516 is an analog sound card/sampler with dual 16 bit A/D converters, 64 times oversampling and preset anti-aliasing filters. It is capable of recording and playing back in stereo at rates up to 48 kHz. Its predecessor, the AD1012, has a single 12 bit linear A/D converter and is capable of record/playback in mono at rates up to 48 kHz. Unlike the AD516, its anti-alias filters

MIDI interfaces

There are dozens of MIDI interfaces available for the Amiga. They can be easily found, new and used. In most cases, they provide one MIDI IN, one THRU and one OUT. It is important to note that most devices that have additional OUT connectors do not allow for more MIDI channels. One exception is the Triple Play Plus, which was designed specifically for B&P Pro. This device provides three independent OUTs, allowing an additional 48 channels of MIDI transmission.

Most interfaces connect to the serial port and are compatible with the majority of MIDI applications without a custom driver.

Other options

Most of the other options for non-Zorro Amigas are limited in various ways but recent software developments have made them more practical. For example, Aurea and Clarity 16 both offer A1200 and all other Amiga users respectively the chance to get into 16-bit sampling - Aurea is actually 12 bit. Sound Probe has drivers to support both of these.

are variable (which can be used for some often interesting effects). Both cards are equipped with an LTC SMPTE time code reader and an ADSP21065 sound coprocessor rated at 10 MIPS. The AD516 was rumored to have a digital audio add-on, but this never made it past the prototype stage. An AHI driver does not exist for either of these cards at this time.

Delfina DSP

The Delfina DSP sound card is interesting for its extra digital signal processing abilities generated by the DSP chip that forms its brain. Unlike most other cards which simply input and output 16-bit sound, Delfina can add reverbs and other effects to the audio stream along the way. The card comes with its own effects control software which doubles up as a sampler, although sadly third party support for its DSP features has so far not materialised.

Where to get them

AD1012/AD516 - SunRise Industries - \$
Discontinued

AmigaAMP - Thomas Wenzel - \$

FreeWare

<http://emigamep.amiga-software.com/>
email: wenzel@unixserv.z.fht-hannover.de
aminet: mus/play/AmigaAMP.fth

AmiSOX - David Champion - \$

FreeWare

email: dgc3@midway.uchicago.edu
aminet: mus/edit/AmiSOX33.fth

Triple Play Plus (clone) - OCTAVE 2

media - US\$146

http:

www.octave2.ch/amiga_e.htm
email: info@octave2.ch
tel 41-32 325 33 71

Soft Synths & Stuff

WaveBeast

WaveBeast emulates a two oscillator analog synthesizer, including multiple wave form selection, filters, envelopes, modulation, and basic effects. It can be programmed using its 84 step sequences which provides control of tempo, transposition, slide and portamento. Sound generation

Why add synths outside your Amiga when you can have a load of them gurgling away on the inside?

process is very fast. Almost 300 patches are included as examples.

303Tracker

Son of 303Emu, 303Tracker aims to bring us the incredibly realistic TB303 emulation of its forerunner in a new improved, easy to use format. The rather hacky intel incarnation

allowed you to generate samples that were exactly like the sound of the 303 end box, but if you wanted to make sequences you had to

use an awkward scripting system. 303Tracker will offer a familiar tracker-style front end allowing notes, filter settings and slides to be programmed with ease, then rendered as 8 or 16-bit samples. Synchronisation with OctaMED SoundStudio is also promised. We'll let you know as soon as it's ready!

Speech

The Amiga's built-in speech system (narrator device/translator library) is quite powerful. Though, using the Say command, you would never know it. SpeechToy adds fourteen more variable parameters to that of

say giving control of everything from articulation to enthusiasm of the computer speech. It also adds direct phonetics entry and translation. There is also a replacement translator library which adds the capability of multi-lingual speech. It includes a system of pronunciation rules, called accents which extend the speech beyond the American English bias of the original. Many accent files are available, including Polish, Italian and even Klingon. This new translator is backward compatible with the old and also faster at phonetic translation.

Wish you could capture the



son requires an intensive calculation process, so the more CPU power it has the better. The length of created sounds is dependent on the amount of memory available.

FMsynth

FMsynth emulates a six operator frequency modulation synthesizer (such as the Yamaha DX7). It includes parameters for pitch, end amplitude, envelopes, modulation, key scaling, phase, level, detune, feedback, transposition and more. Sounds are created in 8-bit and saved as BSVX format. The cal



A 303Tracker is set to its most authentic of environments: 15th year for four of its head's long-since discontinued analog bassline synth.

AHI

With so many different sound cards available, the Amiga needed some kind of standard to access them consistently. Se, Martin Blem created the Audio Hardware Interface (AHI). AHI makes it easy for audio application developers to add support for most sound hardware without having to create custom drivers for each.

It allows programs to share audio resources so that several programs can process sound simultaneously. AHI drives a already exist for the Amiga's internal audio hardware, as well as most popular sound cards. Most major audio applications, and many games, include support for AHI.

Amiga speech as a sound file? There is a rare and little known utility, called Say To Raw, that will let you do just that. It re-routes output from the Say command to a raw audio file, allowing you to use speech in whatever situation you choose.



Availability

AHI - Martin Blem - \$ FreeWare/Donation
http://www.lysator.liu.se/~ics/ahi.html
email: ics@lysator.liu.se
amazon: mus/mosclat/ahi.htm

FMsynth - Christian Spies - US\$20
amazon: mus/mosclat/fmsynth3.htm

Say To Raw - René Eberhard - \$ FreeWare
http://www.cbl.hw.ac.uk/~cs/amiga.html

SpeechToy - Chris Demers - \$ FreeWare
amazon: mus/mosclat/speechtoy2.htm

WaveBeast - Marco Trush/Juan Kutsch
\$ FreeWare
http://www.rdb.th-hamburg.de/~s1480005/amiga/wavebeast.html
email: Jan.Kutsch@rdb.th-hamburg.de

EYELINE - Bringing you the latest Amiga News from Eyetechnic

EZPC spec boosted

30-bit A4 flatbed scanner & 64MB now included as standard

The EZPC is now the cheapest way to get a highly spec'd Amiga 1200 - over 40% cheaper than a Zorro3 solution - and you get a free PC thrown in!

Eyetechnic has enhanced the specification of the EZPC-Tower conversion for the A1200 giving purchasers the use of peripherals now accepted as standard accessories by PC users, but which were very expensive - if available at all - within dedicated Amiga loans.

The new EZPC-Tower configuration now includes:
EZ-Towers Plus with k/b, k/b adapter & 250W PSU
70-bit, single pass A4 flatbed scanner & OCR SW
2 additional high speed serial and one bidirectional printer port

32-speed CDROM (with the option to upgrade to a CDReader/Writer for just £199.95)

24-bit frame grabber (comprised of SVHS source), including motion video & sound recording

3 GB of additional hard disk space

16-bit, 32 voice variable sound card with multi interface and direct to disk recording software

Amiga accessible high density floppy drive

High resolution graphics card with full screen MPEG playback

A1200 and PC ethernet connectivity for use in a network environment, if appropriate

2 x buffered IDE channels supporting 4 drives in total and 64MB of memory on the PC side

EZPC-Tower hardware item	Nearest Amiga equivalent	Amiga price
12-Tower-Plus	Tower equivalent - k/b	£130
A4 flatbed scanner	Eyetechnic N/A V. pkg	£180
Serial & T3 parallel	PortPlus 2.3	£70
32-speed CDROM	32speed & EZIDE	£60
Expansion slots	Microtrak 23 slots	£360
32k res graphics card	Plasma IV	£250
Simulation frame grabber	ProGrab PCMCIA	£130
16 voice & 16bit	Palomix IV	£160
32k hard core	Proline	£170
32k hard core	32k Hard Drive	£140
24 bit density floppy	Microtrak	£55
4-drive buffered IDE of	EZCD-Mk4	£40
2 channel networking	Eyetechnic PCMCIA	£90
MPEG full screen playback	n/a	
EZPC-Tower - £999.95	Amiga equivalent -	£1795

Although it is impossible to give a 100% like-for-like comparison, largely due to lack of choice of equivalent Amiga hardware, the table above shows that implementing the nearest Amiga equivalent functionality to the EZPC system using the Zorro3 conversion route costs nearly 80% more. And of course you can gain a fully functional, high performance PC system to boot your less serious, tinkering activities - such as games.

These devices are available to the Amiga - either directly via the Sanyo RTG 2.5 system - or via direct access of their associated data files by Amiga programs.

As well as 'off-the-shelf' EZPC systems we can also build systems in order for you require special functionality - such as non-linear editing of video tapes. Just ring and ask!

Fully functional Sanyo RTG Software for just £24.95

Do you like the sound of the EZPC-Tower System - but would like to try out the Sanyo RTG system first? Well for just £24.95 you can now experience the full functionality of the Sanyo software - supplied on CDROM - for yourself (Windows 95 PC and Intel mode compatible). What's more you can trade in the software against the full £129.95 (either new or second hand) version of the Sanyo software with full credit (less earnings) within 30 days of purchase. The offer also applies if you wish to upgrade to the Sanyo software on a full EZPC-Tower system. See the prices on the right.

The Sanyo RTG 2.5 software allows you to copy files via & forth between PC & Amiga as well as retaining Amiga screens in the PC's monitor. V2.1 is also slow for graphics - that needs the 100% speed-up of the RTG 2.5 ethernet system.

EZVGA PC monitor adapters now available in 6 models to suit all Amigas & pockets

Internal AA chipset and external universal models available with or without flickerfixer. Why so many models? How do you choose which one is best for you?

Choice 1: Internal or External?

If you have an Amiga with an AA (AGAT) chipset then you have the option to use an internal EZVGA adapter. This is an adapter board that plugs over one of the Amiga chips and joins to a second board which is plugged into the 23-pin video port. The main benefit of this adapter is that it takes the digital signals direct from the 'chip' (rather than by using the analogue output from the external 23-pin connector). This makes the design less complex electronically and results in a lower cost for the finished product. On the other hand fitting (any) internal unit does require a level of manual dexterity and electrical common sense which is not required by the 'plug and play' design of external units. You should also note that the fitting of an internal unit requires the metal shield of the Amiga to be completely removed - thus a far from trivial operation unless you have already done so as part of a lowering up operation. If you have an Amiga other than an A1200 or A4000 then you should use an external model.

Choice 2: Standard or Flickerfixer?

A standard simply allows normal PAL (or NTSC) non interlaced 15KHz (TV displayable) screen modes to be displayed on a standard PC monitor. If you use software that puts the display into these modes automatically - as most games do - then a standard one is probably all you need. This is also all you need if you are using a reprogrammable graphics system - such as an Amiga graphics card or the Sanyo system. For most of your Amiga work, but need to be able to display native 15KHz screen modes occasionally on a PC compatible screen. A flickerfixer on the other hand allows you to display interlaced 15KHz screens - which are normally unavailable on a 15KHz monitor or TV. This gives you twice the vertical resolution and a rock-steady picture for serious applications as well as games. The EZVGA-Mk2 standard can be upgraded to the EZVGA-Plus flickerfixer by adding extra memory chips.

Choice 3: EZVGA-Mk2 or EZVGA-Mk2?

The heart of any Amiga computer - the thing that makes it tick - is a 28MHz oscillator. This is used to govern all aspects of the Amiga operation - including its video output (in that the PAL and NTSC versions of the Amiga require slightly different oscillator frequencies to meet the correct TV standards). Lowest cost external VGA adapters - like the EZVGA-SE and most competitive products - use their own oscillators to 'replace' that in the Amiga by using the Amiga's clock circuitry. As well as including the use of a generic 'off-the-shelf' method to introduce some incompatibilities with some timing critical expansion units such as accelerators. It also needs to be manufactured with different oscillators for NTSC and PAL Amigas so is not universally interchangeable. The EZVGA Mk2 and EZVGA-Plus on the other hand use some advanced electronics to derive an oscillation signal from the Amiga video output. This means that both these units will work with all Amigas and will not interfere with the operation of any other peripherals.

	EZVGA Mk2	EZVGA Mk2	EZVGA Mk2 Plus
	Internal	External	Internal
Pass-through of >16KHz modes	Yes	Yes	Yes
Europe/US Amiga compatible	Yes	Europe	Yes
Upgradable to flickerfixer	No	No	Yes
'Plug & Play' installation	No	Yes	Yes
Uses Amiga oscillator (for compatibility)	Yes	No	Yes
Standard - code: ADPT-VGA-	-INT	-S0SE	-S0BL3
- price:	£59.95	£59.95	£74.95
Flickerfixer - code: ADPT-VGA-	-03	-S0SEK	-S0F
- price:	£89.95	£99.95	£119.95

CDPlus-SE comes out tops in latest review

"Eyetechnic have come up with a real winner with this new CDROM drive" - Ben Vost, AF

Eyetechnic's all-new CDPlus-SE has come out top in a comparative review in the July 1998 issue of Amiga Format, winning a 94% rating and an Amiga Format Gold Award.

The unit is available with either 20- or 32-speed whisper-quiet CDROM mechanisms and comes complete with the Eyetechnic EZCD-SE 4-drive, 4 buffered interface cables and CDROM software written specially for Eyetechnic by the authors of IDEfix. As with all Eyetechnic-designed products, the CDPlus-SE comes with step-by-step captioned pictorial instructions, including detailed instructions for fitting the EZCD interface with different internal hard drive configurations.

CDPlus-SE 20-speed	£99.95
CDPlus-SE 32-speed	£119.95
CDPlus-SE audio mixer	£19.95
CDPlus-SE AT/XT upgrade	£49
CDPlus-Mk2 Full EZ-Tower upgrade	£90

The CDPlus-SE is also available with an optional audio mixer module for just £19.95 extra. This module fits inside the CDPlus-SE case and mixes the audio output from the Amiga with that from the CDROM mechanism at the correct levels. The composite audio is available on gold-plated phono sockets on the back panel of the CDPlus-SE case.

In addition the same mechanisms, cables, interface and software are also available in special bundles with the Eyetechnic MiniTower Desktop and full EZ-Tower cases.

Sanyo RTG 2.1 v/s	£24.95
Sanyo RTG 2.5 v/s	£99.95
RTG 2.5 & PCMCIA cable card	£189.95
2m auto modem cab (for 2.1)	£9.95
Trade-in value of Sanyo RTG 2.1 v/s within 30 days	£24.95

This month sees the release of two major releases, *Foundation* and *Genetic Species*. How long is it since two games of this quality appeared during the same month?

82 GENETIC SPECIES

Hot and heavy hot games. Martin
having being mistaken for Bush.

FOUNDATION

45 TIPS CENTRAL

Buy the best quality at the lowest price with a
free price Advantage program.

QUADRE SPECIALI

ground full of holes, streets and
he isn't afraid to use them.

57 EXPLORED 22ND DIARY

Collins being you the central part
of The World Kennedy situation.



Graphic Spelling



▲ Foundation



▲ 11月26日

Genetic Species



■ Price: £29.99 ■ Developers: Vulcan Software/ Marble Eyes
■ Available from: Weird Science ☎ +44 (0)116 2463800

**Swap bodies like there's no tomorrow
and kill stuff... what more could you want?**

I'm running down that damn corridor again. Every time I hear a clank, and that's all the time – I grip the rifle tighter. If one of those spouts is around the corner I don't know what I'll do – the last thing I ran into nearly killed me until

the last three I ran into nearly killed me until I

was able to lob that grenade and take off back to relative safety. I've gotta find some first aid fast. There aren't any good candidates left for a takeover - all those petty generals were bothering me and I had to waste them. I sure wish I still had the ammo I blew on them, not to mention their flesh around for a convenient bot-

But as long as I – what was that? Whirling around a second too late, I catch sight of the security officer I forgot was lurking in that section of hallway. And as the blood pours down the screen, all I can think of is – damn, it's been a long time since I was able to save the Game.

That's not to say that you can't have a good time just running around blowing away the bad guys in grand fashion. The weapons fire impressively and the bad guys die prettily. But there's a whole lot more in here to discover.



Be afraid...

Since "bright future" science fiction settings don't make for very good shooting action, this Game, like so many others, is set in a "dark future." In the early 2200s, humanity in virtual enslavement at the hands of a few select megacorporations. Nearly everyone has been fitted with mind-control devices, except for a select few who have evaded the system to form the Counter Force Alliance (CFA) who work to break the stranglehold of the corporations. The CFA has been developing a technology called the "Booisher" (to take advantage of those mind control devices by using the shifter to take complete control of corporate employees. Some very strange things have been happening on a large asteroid including huge military

Screen

hulks and the unexplained apparent self-destruction of strategic bases. So the CFA has decided to activate one of the oscillators in the remaining base.

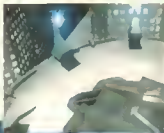
Initially, your mission is simply to explore and try to gather clues as to what might be going on, and unsurprisingly the base's security will do everything in their power to eliminate the intruder (you). But, through cunning and superior firepower, you have to fight your way through levels too numerous to count, gathering keys, clues, and even more weaponry to expose what eventually turns out to be an elaborate conspiracy and stop it before it can do any more damage.

Saving humanity the hard way

There's no way to dither around this issue – the 3D engine is just awesome. Once you open the first door and are greeted by the first row of flashing running lights, something I've never seen done nearly as well in any Game of this type period. You very quickly get the feel that you are there, running through the subterranean corridors of some old distant atmosphere. The baddies swarm around you so fast you hardly notice they have a tendency to "glide" in a manner vaguely reminiscent of Breathless, and the weaponry fire is so crisp and, well, satisfying that you only care how they die, not how they walk. A nose touch is that weapons do not always fire straight forward into the center of the screen (because most human beings have trouble carrying guns squarely in the middle of their bodies), but a hip-point gun sight helps you call your shot.

Genetic Species is full of unique little wrinkles. The artists really avoided "blocky computer graphics syndrome" in spades – there are a few things you can get "too close to," usually very skanky objects like rotting corpses from mishap experiments, but it's far better than most Games where merely

approaching a wall turns it into a big visual prize. The element of surprise is used to great effect – there will be times when you wonder where all those guards could have poured out from, only to realize that you should have reacted to the warning signs much earlier. Doors open and close around you – somewhere in the distance, but still audible – and will keep you guessing as to who might be coming, and when. And then



The CFA seems to be a leading at the Cortex base.



Mad scientists, at their mad work.

there's the "Portable Probe Device" or "Paradroid Meets Quake."

The PPD serves two purposes. For starters, you can launch it (presumably out of the head of the creature you're currently inhabiting, which would certainly look interesting) to shoot into the corridors ahead to investigate. It travels forward extremely fast and with a wild color scheme (very cinematic), and will travel for a few seconds or until it hits a wall. The second use of the PPD is to take over an enemy. In theory, any enemy you meet can be shanghaied into your cause, but some are more vulnerable to takeover than others, and stunning them first (either with a stun-specific weapon, or sometimes you get lucky by whacking them with a few probes) helps as well.

When you successfully take over a creature the one you had been inhabiting dies – sometimes, it seemed, taking all of his weaponry and



I want a bigger gun. I wanna blow things up!

Tools of the trade

All good things must come to an end, and here are the tools. Genetic Species gives you to get them there faster. A game like this needs a nice range of decent weaponry, and Genetic Species scores a definite A+ in that area. There are weapons by the bucketload, and they're complete with some spectacular lighting effects that give a real sense of just how powerful your latest discovery is. Get hecking, shooting and zapping!

44 Pistol

Silenced Pistol

Industrial Drill

Fire Axe

Tezer

Rechette

Flamethrower

Leser mine

Hand grenade

Mnigen

Assault Rifle

Rocket launcher

Mine

Plasma gun

"Don't touch it's paid for."

ammo into the abyss as well, which is rather unfortunate, and difficult to justify from a design point of view. But the takeovers are sometimes necessary, or at least extremely helpful - certain types of characters (particularly engineers and security officers) have



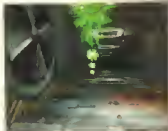
▲ Rocket launchers are not always good in close quarters.

access to rooms others simply cannot reach and the physical stature of self other foes makes them attractive to get into small cramped places. Because of this feature, it's

sometimes in your best interest not to simply blow away everyone you meet.

The exploration of the four bases in Genetic Species is probably unlike you've ever experienced before in a 3D shooter. This is nothing like a level of Alien Breed 3D or Doom or Quake - kill a dozen enemies, find a key, kill another dozen enemies, search for secret rooms, exit the level, do it all over again in another setting. You will have to visit and re-visit rooms, backtrack to pick up weapons you had to drop in order to make sure there wasn't a hidden switch you missed, take countless elevators up and down, all while minding a rather frugal ammo supply and, of course, your sanity. Add to that the very refreshing rudimentary AI of the enemies - they run away from you when they're dying, call for help, and even try to track you down if you get away from them or vice versa.

To get past of this madness, the key you need might be two or three full floors away, and many elevators in the Game have only one destination. Fortunately, in another interesting wrinkle, you always have access to a generally complete



▲ As a Face Hugger, you can opt streams of acid for yards.

floorplan in every level, which you can overlay on the screen at any time. Certain things like disused corridors or secret hallways and chambers don't appear on the map, though, so it is by no means exhaustive. The map is available even when you first enter a level, so you can check out the entire floorplan.

▼ The angry probe-cats.



Know your enemies

Genetic Species boasts one of the most expensive and varied collection of opponents ever assembled for your destroying pleasure.



Engineer: Not a threat, but be careful when he takes them over. He's so frail that if you don't stun them, the probe will finish them.



Scientist: A good idea, but a pesky one. He's a pest.



Security Guard: A good idea, but a pesky one. He's a pest.



Snake Priest: A good idea, but a pesky one. He's a pest.



Stormtrooper: A good idea, but a pesky one. He's a pest.



German: The Danish materials refer to him in the amusing. It is not purely intentional, of "the abdominal" But he's ugly, and that which is ugly deserves to die.



Face Hugger: A good idea, but a pesky one. He's a pest.



Marine: A good idea, but a pesky one. He's a pest.



Rocket Launcher: A good idea, but a pesky one. He's a pest.

before you make a single step. It's a little disappointing that the secrets you do manage to find still don't appear on the map, however.

Genetic Species makes very good use of a range of Amiga hardware. There is a small set of preprogrammed resolutions and the ability to use most graphics cards, and sound is provided through AHI. On a high-end machine, 320x250 (the top resolution) looks just wonderful, far better than you would expect given the fact that it is considered "low res." These days, even with double buffering and full audio enabled. Even if you're without RTG capabilities, the Game moves along at a very good clip for AGA users. And the sound is absolutely fantastic.

The CD tracks of mood music are very appropriate, the constant spooky clanks and grinds keep you on edge, and the sound effects get gradually more sinister and "icky" as the Game wears on.

▼ Don't try this at home kids!



Mechanoid is one of the most menacing of the Game, very difficult to kill, even more difficult to make good use of if you take one over — they don't have good hands, you see.



Arachnoid is a tribute to 70s horror and Robospys. Brutally lethal. Throw grenades and run.



Zomboid is a tribute to very old to kill. Put them out of their misery with a flamethrower or energy rifle.



▲ Work's been tough since the new stress mode.

Evolution of the species

Nobody's perfect. Genetic Species has some design flaws — some nagging, some notable. I had a serious problem with the Game's saved Game and options screen abilities. You can only save your



▲ Be very, very careful when shooting fast tanks.

▲ In case that doesn't get their attention, spit shells.

Game when you discover the exceedingly rare "save Game" powerup — you can leave it there or lug it around, occupying one of your three precious inventory slots until you're ready to use it, but once used, it's gone until you find the next one. In a Game as huge and expansive as this one, where killing the wrong guy can suddenly make your mission much more difficult, maybe even impossible, frequent saves would certainly have been welcome.

So would an easily accessible options screen. To change screen size, brightness, or to reload a saved game. But to do these things, you have to locate a computer terminal. Sometimes, they're in great supply; other times you can't literally be locked away from one and have to use a special keyboard combination to quit — there's nothing else to be done! Just hitting the escape key to pull

up the menu is all that was required, but they really missed this one. Finally, I have a problem with the Broshtite/probably-taking people over premise. If, as the Game alleges, we're taking over the bad guys who presumably are friends with the other

bad guys, why do the other bad guys instantly recognize us as "good guys" and begin shooting? I would certainly understand if they saw or heard us shooting at people or things, or saw us meddling with doors we shouldn't be near, but no, despite taking over the body of an enemy commander, we apparently still have a sign tattooed on our foreheads reading "I am an intruder." I really wanted to get into the story line of the Game, but I found this a very glaring flaw. That, and I'm really sick of plotlines which rely so heavily on an Alien.

The online documentation alludes to an upcoming level building CD, but no word on the Vulcan site for a release date. Without that product, a really Geuectic Species remains a very impressive, stand-alone Game. And despite the difficulty in comparing Quake to GS, the comparison will ultimately have to be made, and it is for this reason that GS scores a

scant point less than Quake. Quake proper is the less engaging Game, but by buying into it, you buy into literally hundreds of other Games. GS is a thin node and a half, but when it's over until their level creator comes out and people learn its tricks, it's over. ■ Jason Compton

GENETIC SPECIES

■ CPU ... 486 min
■ Amount of disks ... 2
■ RAM ... 1MB
■ Hard disk available ... 100MB

A tremendous effort — a great synthesis of adventure, suspense, and 3D blasting.

94

Foundation



■ Price: £29.99 ■ Developer: Paul Burkey/Sadness Software ■ Available from: Weird Science
 ☎ +44(0)116 246 3800 ■ www.sadness.demon.co.uk

Second in this month's pairing of big releases is the long awaited Foundation. A game of impressive depth... but is it engrossing enough to pull you in?

A I test Paul Burkey's Magnum Opus is with us. Much tried as proof that the "bedroom programmer" is not an extinct species yet. Foundation started a couple of years ago as an ambitious project by a shareware author. Drawing inspiration from God games of all types, with a spicy dash of real time war game, Foundation has grown into a game of awesome proportions and rich detail. Amazingly enough, it has come out at last and thumbed its nose tearily at those fools who believed the led Burkey would never finish his epic.

Foundation is a "God" game, a genre inspired by the seminal Populous by Bullfrog. The player controls the development of a community from a position of divine power, standing down on the isometric world below and bestowing destruction or development with a few clicks of the mousebutton. The game has developed a lot since the early days, greater depth being the current trend. Foundation certainly follows this trend with an enormous range of features, the scope of this game developed continuously as the game itself was developed, a vicious circle which might have lead the game to grow in ever increasing cycles of complexity until it became more realistic than the real world and took up dozens of CDs, if someone hadn't finally yelled "stop!"

Playing God

The design of the in game graphics uses the traditional isometric view to display the main playing area. This occupies the largest part of the screen. It is flanked by the main control panel and the overview map of the

island, and a list of all available resources in your Headquarters runs along the bottom of the screen. You move about the playing area by dragging the mouse to the edge of the screen in the direction you want or by clicking to a new location on the mini-map. When you start, all but the immediate area is in darkness. Your surroundings are only revealed by exploration. You control a population of peasant workers, magicians, soldiers and scientists, and there is also a healthy supply of maidens to exploit in leveraging the expansion of your population base.

Building projects require resources to be collected. The resources on the surface are finite, but can be replenished with a bit of magic when you discover the secret. The range of buildings is huge and grows throughout the game as your scholars discover more and bring the "tech level" of your society up. Of course that is dependant on them surviving to a ripe old age and keeping

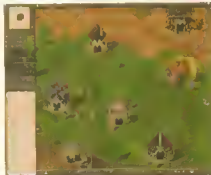


It starts so simply and slowly...

them sufficiently comfortable that they can spend time in their workshops tinkering with their tools. There are natural resources such as ore, gold, coal and wood to manage, there's food to gather, and of course enemies to battle with.

Game play is continuous and does not stop for you to check your statistics or give your orders. The men scuttle about the landscape and between the buildings working and carrying, much as they do in The Settlers. However individuals and whole groups can be selected with the left mouse button, and ordered to a different location or to occupy a different building with a simple click of the right mouse button. The building a peasant inhabits indicates the type of role he is expected to fulfil in the society you are guiding. Typically for Foundation, there's a little more to it than that.

A big advantage of Foundation over all of its predecessors is the added complexity of



Architects anonymous

Here's just a small selection of the buildings you can construct:



Headquarters: the heart of your



Workshop: you'll convert raw materials into gold, probably meet weekly used as a steel.



Barracks: your headquarters to wrap down troops, high-tech etc.



Temple: single and the neighbourhood's meeting place.



Mine: This building always, see, coal all.



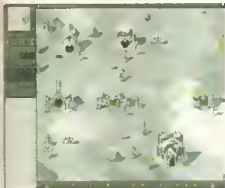
Granary: You gotta have some kind of foodstock.



Treasury: Here your can be converted into gold and used for the secondary to a new line of buildings.



House: I thought you came here to live. In the old days, stuffle until it's a bit of a pain and you can get it done.



the resource management. As well as presenting the production and transport of the resources, the supply of resources to end output of resources from, each building can be adjusted to meet your needs. For example, if you are short of gold, you can set your mine to produce ore only and tell your refinery to stop producing steel. There is also a stock market where goods can be traded in times of lack or surplus. Sid Meier's masterpiece Colonization attempted a similar degree of complexity in resource manage-

ment, but the enemy forces can nip off with your gold while your guards clumsily chase them in a kind of slow-motion arithmetic keypress sequence.

A nice little bonus concept in Foundation is magic. You have wizards who use a resource called mana, which you develop by burning the corpses of your dead in a cemetery. They can use this mana to cast a range of spells, which like the tech levels improve and expand with development. Mostly you will use your wizard to build

buildings - who needs a job when you've got a bloke in a party hat and a dress? By constructing the correct combination of buildings, keeping a close eye on your resources and ensuring your minions are well fed, well watered and happy, you should be able to build up enough strength to complete your mission. You can quickly learn to order your mostly loyal populace about.

However it is easy to get the balance of buildings wrong, at which point your population can start to go into a dramatic spiral of decline from which it is frustratingly difficult to

escape. Another thing to watch out for is when your people are getting bored and depressed, they start to tamper with the production levels in the buildings. In such instances I find that destroying the building and all those within it is the most satisfying

escapes. Another thing to watch out for is when your people are getting bored and depressed, they start to tamper with the production levels in the buildings. In such instances I find that destroying the building and all those within it is the most satisfying



A
Love world -
has : go for a
trip on this
beach.

solution, but not to be recommended if you are running low on people or resources.

Control freak!

The control panel gives you access to a host of statistics with which you can monitor the progress in the minutest detail. However you have to keep an eye on the mini-map area as potentially important messages can appear at the top of the screen at any time.

A tiny icon by the side of the mini-map allows you to zoom to the subject of the message in an instant, so you shouldn't miss too much. Alas your cause is not helped by crammed design, with all the statistical data squeezed into a small space. With a nice large monitor, the icons are quite clear, but a smaller monitor or worse a TV can leave them rather fuzzy. The inevitable consequence of having so many things to control is that you need a lot of buttons, and it would be nice if you could, for instance, leave pop-up control windows scattered around the screen, or have some room submenus that kept the overall room count down.

Other than that, the presentation of the game is very professional and very polished. The game can be installed onto your hard drive in totality or in pieces, depending on the amount of memory you have available. Obviously the more you install, the less disk access will be required during game play, and the faster it will run. There are also a number of options to select when you activate the FoundationPrefs screen before loading.

Feature list

We strove to compile a list of features but ran out of room for the review. The wealth of clever little features in Foundation is amazing: distant sound effects, AI support, mugshots of real Amiga users, complete lifecycles for peasants, the use of alcohol and nice fire effects - you could go on forever. It is a testament to the imagination not only of Mr. Burkey himself, but of the hundreds of Amiga users on the Internet who came up with ideas and suggestions for the game. Put yourselves on the back!



Back to
property to let -
foundation a
supernatural
of this

ment, but Foundation manages to be both less cumbersome and more detailed.

Lookin' for trouble?

The combat system in Foundation is pretty straightforward. Fights can easily be started

get the
time when this with more
a garage for Marge
the farm is actually the
all of your wheat, root vegetable

but: Build one of these
you are why your great
don't need to harvest
the old five-louche shuffie
all of your mending risk from

own with their own garden.
laboratory: Build a laboratory
and your minions will think up
ingenious labour saving
devices and new buildings.

Warriors: In exchange for a
dose of gold, you can train your
warrior to become a wizard,
intelligent and soldiers.



the game, such as screen and graphics size, and what screenmodes to use. Foundation runs in AGA or on graphics cards, although the hefty chip RAM demands really does limit AGA screens to the smaller screenmodes. It's not that there is any problem with the smaller screen modes, it's just that playing in 800 by 600 pixels is nicer. Never mind, you'll just have to get yourself a graphics card!



When you load up the game and sit through the opening sequence (nice, but too oddly and uncomfortably slow on AGA) you get to the main menu screen, which sets out the options clearly over an impressively red sun set. The lovely rendered images of landscapes and seascapes which appear on all the menu screens and between levels are an attractive feature.

There are two types of game to choose from, the conquest game and the custom

game. If you choose the conquest game, you are faced with the first of the 40 missions included on the CD. You start the game with a Headquarters, a foresters hut and a pump house. From these humble beginnings you must build up enough resources to progress to the next level, each mission introducing more complex targets to achieve and more aspects of the game.

In a custom game you get to create a game to suit your mood. You can pit your wits with between one and three computer opponents, and there are a selection of different objectives to choose from, such as controlling 80% of the island, destroying all enemies and torching all enemy buildings. Different terrain types can be selected which change not just the colour of the graphics, but also impact on the game play. For example, if you chose to play on a lava island, not only are you surrounded by a fiery sea, but the harsh conditions seem to cause your people to suffer serious health problems.

Animation?

The lovely polish of the front end is not entirely carried through to the game. The landscape is excellent, but some of the unit detail needs work. The graphics representing the buildings look nice, but lack animation to illustrate the work going on in the building. Not only would this bring more vitality to the game, but it would most importantly indicate when a building has reached the end of its useful life or has become unoccupied in times of labour shortage. As it stands, you have to be careful to check the status of your structures regularly to catch problems. The characters look good in a Sensible Software/Megala-mania sort of way, but the animation is a little stiff and could do with work. Overall, however, it is a step above what we are used to on the Amiga for this genre, and it's really only the high expectations that it trips up on. There are some nice touches to the game, like the unique identi-

A Lovely rendered graphics of your next conquest. Don't let all niceties be half this way.

Update frenzy!

One month on from the initial release and Paul Burkey has already released nine update patches. The first run of the CD has sold out, and the new pressing will have all these fixes and more, including an improved manual. Features which are promised to come in this and in later updates planned over the coming months are:

- Better character graphics
- Faster graphics card support
- TCP/IP support for network play
- More language files
- Mission expansion packs
- Landscape editor
- More gameplay tweaks
- Split screen mode (yes!)
- Whatever else people suggest!

bes of individual peasants, each having a 'tasteful' photo and name to aid abuse-fuelling, and the way the ghosts of dead peasants rise to the top of the screen.

The in-game sounds are good – simple, unexcessive, amusing and not too irritating. There are some nice touches such as when your minions respond verbally to your commands, and you can load your own samples for further Worms – like fun. There's even a few new agey CD audio tracks to keep your ears from getting bored – a bit well-worn, but well suited to the task and well done.

The biggest flaw in this mainly excellent game is the manual. It has a nicely presented HTML guide, but rather lacking in detail. Ideally there ought to be a comprehensive manual detailing all the buildings and units precisely, listing what is needed to construct them and what they can produce. An online guide along the lines of the Civlopedia in Civilization would have been a welcome bonus, but as it is, the game can be a little hard to get into.

It can be challenging to get into this game, but even early on it is evident that this epic creation has enough potential to keep you interested for many a long hour. Complex, intriguing and ultimately satisfying, the sheer depth and involvement of this game outweighed the rough edges and forced through to a screenstar. Playability suffers a lot because of the limited instructions and cluttered controls, but if the updates cover the issues raised, Foundation could ultimately earn several more points.

Andrew Koss is Jonathan Brookins

Check out that selected character – that golden throne person. He's got the best job in the world!



FOUNDATION

Processor	100%	Graphics	100%
Sound of disk	CD only	Sound	27%
RAM	2MB	Usability	100%
Hard disk available	Yes	Playability	100%

VERDICT

Superstar despite the flaws – and it's still getting better.

90%

Tips Central



A few more lost souls are rescued from the deep, dark pit of despair by our resident adventure guru Sjur Mathisen.

Sixth Sense Investigations

Not long ago I bought *Sixth Sense Investigations*. I didn't let me down, but either it's harder than earlier adventures or maybe I'm telling myself down.

I had no problem with Monkey Island and the other greats, but now I'm stuck! How do I get the big cheese off the man in the cheese factory? How can I get the thing on the trucks forklift in the toy factory? And how do I catch the mouse in my office?

Gene Reeves, Essex

In this game as in every adventure game you have to explore every inch of the screen with your pointer to find all the objects. I had problems finding a couple myself so I know how you feel. To get rid of the cheese open the cupboard door closest to you in the cheese factory and grab the metal bar.

Then just sharpen it using the stones on the table in the other end of the room, and chop away. The forklift truck in the toy factory needs power to work. Next to the car you should buy at the garage there's a car battery. It's a bit dirty so try finding a towel you can use to wipe it clean. Then grab it and insert it into the engine on the back of the forklift truck.

Finally, to catch the mouse you need some cheese crumbs; you should look in one of the buildings. Guess which. Then you just need the 2 items you'll find in the cupboard in your office. Happy hunting!

Sixth Sense Investigations

In *Sixth Sense Investigations* I can't find anyone that can put

the armour on Ben. Please help!

Michael Turner Ross on Wye

Congratulations on making it past where the previous guy was stuck first of all. Now the answer of your problems. You have to buy the empty bucket in the pawn shop. Fill it with oil from the device next to the transporter and the robot guard. Then swap the bucket with the bottle of oil in the bar (the guy at the table is too drunk to notice).

Give the oil to the "oilaholic" outside and he'll give you a map. Next give the cabdriver a

someone the first month I did this helpline, but that's 9 issues ago so I guess I can repeat it just for you.

Those two things are connected. You need to use the wax from the beehive on the barrel to plug it. Then the bermen will think it's empty and carry it outside.

Now, how to get the wax. You should head for the castle. Use the clapper, you might have found at the blacksmith's, with the bell and a long piece of hair will fell down. Climb up and into the window. Talk to the girl, and kiss her. Whoops! Take the repulser back to the chocolate

before you get your hands on it. My guess is that you already have gotten the Vacuum cleaner from Bob, so we'll start off standing next to Bud. Talk to the guy next to him until he gives you the comic. Go back to crash site and give the comic to Sparky.

Go back to Bud. Then take the right path, and then turn east. Talk to the gorilla and tell him he doesn't exist. Go South and talk to Merry-Lou. Ask for the dictionary and swap it for the file. Talk to the others about sloths. Use your sharp knife on the banana. Then give to the monkey with the

truffle house and let the "it" have a little taste of the door. Once inside, take the hat and the smokebox. Use the smokebox on the beehive and there you go. Back



switch watch and he'll take you anywhere whenever you hand him the map. Ask him to take you to the doctor and you'll get all the help you need.

Simon the Sorcerer

I've won the 5.0 release I can't get the beer barrel in the pub but I read somewhere I need it so please help me. I was told it had something to do with the beehive, but I can't figure out what?

Ben Aitken Hastings

Deje Vui

I got both these questions from

where we started, in the bar, ask for a drink to keep the bermen occupied while you do your magic.

This worked 9 months ago, so I guess that it still does

Flight of the Amazon Queen

I've been stuck on the Flight of the Amazon Queen for quite a while now as I can't find the ingredients for the rash cure. Please help!

Sandy Walker Sutherland

Tons of stuff has to be done

Apologise to Faye. Go West and to the pinnacles. Head for trader Bob's and talk to the chief. Enter the store and give the flower to trader Bob. Get the net before you once again return to the crash site. Use the net to grab the perfume. Back to trader Bob's where you give the perfume to Naomi.

Now it's off to Flode Camp to pick another flower. Go back into Jungle and north. Use the flower and then the scissors on the Sloth. Go to trader Bob's and talk to the witch doctor about the Rash Cure. Use the knife on your coco-nut. Then head over the 3 ingredients to the witch doctor. They are: the coco-nut, the sloth hair, and the vacuum cleaner.

Now you can make Bud happy, and hopefully I've made you happy. ■ Sjur Mathisen

Quake Special



Quake has more built-in cheats than any other game ever! Try out this little lot then...



Quake is absolutely crammed full of cheat codes left over from the original test mode. To activate these, simply go into the console mode while playing a level (by pressing the "~" key), type in as many of the cheats as you want to use and return to the game.

GOD Unlimited power.
IMPULSE 9 Gives you all the weapons, even the thunderbolt which can't be found anywhere in else in the game.

IMPULSE 255 Gives you quad damage.

IMPULSE 11 Gives you a Rune. You must exit and go back in the console each time you use it.

MAPE1M? You guessed it. This takes you to that map. Replace the ? with a value between 1-8.

NOCLIP No clipping, pass through walls.

FLY Fly around using the "d" and

"c" keys to move straight up or down.

NOTARGET Monsters won't attack you unless you bug them.

R_FULLBRIGHT 1 Suck the shadows right out of the game. An interesting code.

NOTARGET Makes it so the enemy can't see you, use with code below.

R_DRAWVIEWMODEL 0 Makes you invisible.

GIVE Very useful, can have many parameters. For example for shells type "GIVE" then the line below.
"Give S #". Make sure you input a value for the #.

GIVE # Gives you weapon #
S # Gives you # Shells
N # Gives you # Nails
R # Gives you # Rockets
C # Gives you # Cells
H # Gives you Health #

The grappling hook

On the team play levels there is usually something called a grappling hook that you can use to scale walls

and go just about anywhere. To get this hook, go to the console and type "impulse 22", then press Enter. When you exit the console you should have the axe selected. To use this hook you just hold down the CTRL key and you'll fire off a purple blob (the hook) then you'll be pulled across to the wall, ceiling or floor that the hook hit.

Level status

If you're wondering how you're doing on a particular level, you can hit the Tab key and you'll be told how many secrets you've found.



how many monsters you've killed and other useful info about your progress.

The nightmare level

If you've beaten Quake on all the difficulty levels, you might want to try the Nightmare difficulty level which can't be found via conventional measures. To get there, pick any Skrit Hall and on the Introduction level, go up the stairs leading to the fourth episode, The Elder Worlds. Notice that it says,

"Your worst nightmares come true here." Walk into the water, but not too fast. While you slowly sink, move all the way backward as far as you can, and when you pop out of the water again, you'll land on a wooden beam. Walk to your left, where you'll find a passage leading

to a Nightmare skill teleporter. No matter what weapon you're carrying, you can increase your ammo to no known limit by continuing to pick up that weapon whenever you see it. Note: This works only with the



actual weapons themselves, not the ammo boxes which will max out as normal if picked up.

The death match

Playing the death match is a totally different tactical challenge compared to the single player game. These tips should help you cope especially if you've found your way onto one of the multitude of Quake servers connected to the Net.

No skins

Getting tired of all those campers hiding in the shadows with their all black skins? Well, you can out smart them by using the "no skins" option in your GameSpy options. To you they will appear in base skins, but to them, you will appear in whatever skin you have selected.



Sniping

Use the keypad 'open bracket' key to zoom in and out on targets. This is especially good for sniping.

Suicide

With the Thunderbolt, wait until there is more than one enemy in the water. Quickly jump into the water and discharge the Thunderbolt. Everyone will instantly die. As long as there is more than one enemy in the water, you will get at least one positive frag.



Charging

Use charging as a last resort. When out of ammo and facing an opponent with a Rocket Launcher, charge him in hope that when he discharges a rocket you will be close enough that the blast will kill him too. He won't get a frag if he dies too!

Strafing

Very hard to master, but something all pros do. Never stay still when facing your opponent. Always move around and try to strafe side to side or around him. Dodge and circle. If you strafe enough your enemy can lose sight of you and you can kill him by shooting him in the back or side. Also useful for dodging incoming projectiles.

Camping

Use dark corners to hide and surprise your enemy. Make sure you have a weapon that will kill with one shot, such as the Rocket Launcher. Don't stay in one spot too long, but move from shadow to shadow.

The mouse

Most great players use the mouse. It is difficult at first, but you'll learn in time. It lets you to turn, strafe, and man-

oeuvre much faster than the keyboard alone.

Mouse aiming

Turn on your crosshairs using the 'crosshair 1' command in the console. Very effective for better aiming in heavy battles and sniping from long distances.

Armour

Don't underestimate the importance of armour. With the right armour and a full stock of health, you can take four rockets and keep on fragging.

Knowledge

Learn the maps. Know where all the weapons, health, ammo and power-ups are. Follow a pattern that will provide you access to ammo and health. Never be caught outgunned. The average life span is 5-7 frags. Doing the following will surely raise your life span.

Run

If you are outgunned or out-matched, don't be embarrassed to

leg it and get the hell out.

Corner attack

When being chased try to take the nearest corner. Once you have passed the corner, do an immediate 360 and start pumping some grenades from which you came.



kill 2 out of every 10 times.

Jumping

When being fired upon, jump

around while trying to dodge your opponent. This makes it hard for them to get a clear shot at you. It also makes your enemy use lots of ammo and annoys them too!

Backward attack

Try doing a 180-degree turn and run backwards while being chased. As you are running backwards away from your enemy fire with all

you got. Be careful of Lava and other traps.

180 degree turn

With a key defined to perform an immediate 180-degree turn, the possibilities are endless. The most useful reasons to do a 180 turn are if someone is shooting you in the back, you can turn around quickly, or when you just need to make a dramatic course change. Practice performing the turn and see how it benefits your play most. Setting up the 180-degree turn is a bit complex. Enter the following:

```
bind "j" "turn"
alias turn "cl yawspeed
1000;+right wait;wait -
right;cl yawspeed 180
```

Substitute the ? for a free letter key on your keyboard. ■

Chris Green



Founding Worlds **2**

Explorer 2260 diary

The World Foundry had the idea, but what about the detail? There are a lot of decisions to be made and a lot of information needed to produce such an in depth game...

A discussion of the game progressed and the features list grew in size and complexity, so did the minimum specification. It became clear that even 68000 would struggle with many of the features we wanted, but the announcement by phase 5 that they would be producing PowerPC accelerators offered a route which would allow even the most complex features to be implemented. Vulcan took the very brave step of supporting our decision to move development of Explorer to PPC as a priority, despite the fact that PPC had not yet reached much market presence at the time.

Unfortunately our path to PPC was for a long time complicated by the acrimonious squabble between phase 5 and Hage and Purser over their rival software solutions which has thankfully been resolved. The devs from World of Amiga have driven us back more but for the present, we are continuing development of the PPC version of Explorer. We will of course be observing developments concerning OS 4 and 5 and the new "Superchip" Amiga.

Explorer's goals

The other result of our growing ambition for the game was that Explorer 2260 would have to have a background deeper and more realistic than any other game to date.

While many games are accompanied by a heavy or incomplete plot, the concepts underlying Explorer 2260 demand a huge amount of reference material to create the feel of "being there". Just as an ongoing TV series needs a single reference source for all the information the various writers will need - normally referred to as a series bible - Explorer 2260, with all the external developers and in depth background material, needed a central information resource. For us, this resource is the Collins Encyclopedia Galactica (named after Ed Collins and nothing to do with any reference book companies), the main reference document to The World Foundry (TWR) galaxy. It is already over 4MB in size and still not complete, but you can see the latest version on this month's CDROM.

When Chris began work on Explorer he had already decided that this background

▶ *Monks, a busy looking Monks store, a water bug would deliver much enjoyed by the Gorbans, apparently!*



would contain much more than simple plot descriptions. He realized that to prevent a scenario which is a feasible scenario, it must be described. For a while this even extended to the quantum mechanics of Chris' Hyperspace theories! With the ever expanding detail, it soon became apparent that more contributors would be needed.

Chris sent an advertisement to the world; the penname email mailing list, the E2260 development website, and the E2260 mailing list. Using Amiga websites and newsgroups limits the possible applicants to a certain category: those who love their Amigas, love playing games on their Amigas and like playing space simulators. Five years ago, Explorer would have been impossible but, with the internet, the people most interested in and dedicated to the project became partners. None of the usual prejudices - race, age, gender, creed, ST/TNG or 85 got in the way; only talent and commitment were important. In short, the effort had become global.

Can't little funny creatures

Communication even sometimes has a problem as many of the subdev developers don't speak English as their first language. It's occasionally difficult to get the point across. What, for instance, is a "Cavis"?

Vaipen (one of the background developers) announced recently that an alien race

he has helped develop have heads resembling a 'Cavia'. No one reading the mail knew what that Dutch word meant. His description, "A cute little fluffy thing people keep as pets" didn't help much either. It took a few days of translations to 'Meerschweinchen' and 'minkraht' guessing to discover this mysterious and monstrous creature he was talking about was a guinea pig.

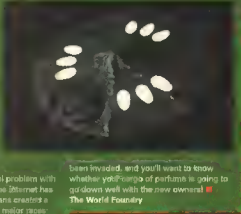
Apart from the occasional problem with guinea pigs, working over the Internet has suited the team perfectly. Chris created a basic outline for each of the major races: the Ovasians, Valpen, Korbonen, Magosians, Elariens, and Terame (Hümanen). From there, the background writers took over. They have created physiologies, homeworlds, social structures, religions, and special dispositions. There are also now a dozen other races – creatures from aquatic, dolphin people to huge centipedes with tentacles. Once these descriptions are finished, they are sent to Ed for approval.

All that decides which winds up into the Encyclopedia, and which need more work. Careful tabs must be kept on the details as well – every one race can have the oldest written language, the best genetic implants, and an intolerance for Phoxide beams. Likewise, all the eight species must have conflicts and peace treaties.

Always need to be done, so the writers know when the plank lies. Also, the 3D artists are the only ones who consult with specialisms – favourites always seem to be those the external developers submit. So rough sketches are sent to either Ed or Rob, and the work begins. The ship or alien is modelled, and either sent back to the original artist or the rest of TWF for criticism. The ability to send scanned images back and forth to people makes collaboration a snap. Responses are often the same day. The World Foundry send each other at least a dozen mails a day regard images, programs, and beta testing.

Does all this sound a little over the top to you? Not to us! The heart of Explorer 2260 will be a dynamic, ever-changing arena. We want the player to live the game, not just play it. Unlike Elite, the universe around the player is ever changing – one day you might find your favourite planet only to find it has

A famous Magosian beauty... in a universe this big, it takes all sorts!



been invaded, and you'll want to know whether your cargo of perfume is going to go down well with the new owners! ■
The World Foundry



The external developers

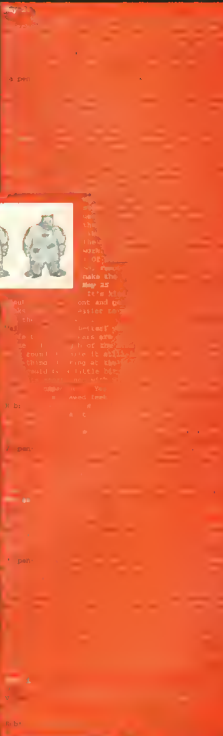
During the development of the background a number of people have contributed text files, graphics and ideas.

Chris Korhonen
Mertijn Sanders
Valpen
Dave Crawford
Andrew Seergie
Andreas Thörn
Steven Wojleschowski
Fred Ovasia

Many thanks to all of them for the work they have done.



Email confusion!



We follow the musical theme with reviews of a couple of major new audio releases, Soundprobe 2 and Samplitude Opus. For the less audio inclined there are cameras, scan doublers and oddments - not to mention the cut-price Siamese V2.1

Tech

04. SOUNDPROBE 2.0
We heard Soundprobe 2.0 was going to be a real winner. Now we know it is. Simple editing, great graphics and more about it.

05. SAMPLITUDE OPUS
A real winner. Samplitude Opus begins to appear to be more professional than...

06. EYEATCH CAPSULE 3E
What does it do? Well, it's a scan doubler. What? Look no more than...

07. VIDEOCHIP DIGICAM
Quick online digital camera from Power Computing.

08. SIAMESE V2.1
A real winner. Siamese V2.1 is a real winner. It's a real winner. It's a real winner. It's a real winner.

09. SCAN MAGIC
A real winner. Scan Magic is a real winner. It's a real winner. It's a real winner. It's a real winner.

10. CATWREASER MX II
A real winner. Catwreaser MX II is a real winner. It's a real winner. It's a real winner. It's a real winner.

11. PD MIX
A real winner. PD Mix is a real winner. It's a real winner. It's a real winner. It's a real winner.

12. PD POST
A real winner. PD Post is a real winner. It's a real winner. It's a real winner. It's a real winner.

13. ART GALLERY
A real winner. Art Gallery is a real winner. It's a real winner. It's a real winner. It's a real winner.

14. USER GROUPS
A real winner. User Groups is a real winner. It's a real winner. It's a real winner. It's a real winner.

Sound Probe 2.0



On its original release it was the best thing to happen to Amiga audio in ages. Now here's version 2 and it's even better.



It's back, and it's got more hooks up its sleeve than ever before. Sound Probe originally racked up a 90% score in the Jan 96 issue of CU Amiga.

Since then it's been improved and expanded to include an exciting arsenal of special effects and new features.

If you missed the original review, go and dig it out or get it from our back issues department. For now though, I'll fill you in on the general picture. Sound Probe is a sampling and sample editing package designed to work with as many different hardware configurations as possible. To that end it has support for sound cards via AHL, direct support for Auro, Aure 8, Clarity 16, Megaloud, Magnum Master and generic parallel and PCMCIA samplers. It also goes out of its way to import and export as many audio file formats as possible, including 8SVX, AIFC, AIFX, AIF, IFF16, Studio16 WAV and RAW.

Once you've got your sounds sampled or loaded the fun can begin. Pick an effect. Any effect. Anything from the most obvious day to day process to the most abstract. It's almost certain you'll be able to do it with Sound Probe. Reverbs - yeah, hundreds of them. Flangers and phasers - an unlimited amount of variations. Then you've got your more exotic options: like the srl to be improved vocoder (as used on the vocal in

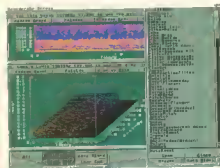
Ar's 'Kelly Watch the Stars'), the resonant filter for extreme filter effects, the pitch bending time stretcher. Then there are the useful, professional type processes such as the vocal filter (which tries to remove vocals from a stereo sample), the compressor for evening out sound levels and the 128 band graphic equaliser.

Add to those the string of enhancement processes, such as declick, brighten, bass boost and so on, and you've got a lot of power at your disposal.

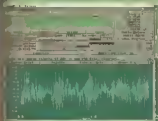
Sample this

For sample based musicians, Sound Probe is a godsend. For example, while the Amiga's most all-round powerful tracker, OctaMED SoundStudio, has quite a few effects available during playback (these tend to be quite basic due to the computing power required to generate things like reverb, flanging and so on. That shouldn't be a limitation now, because you can prepare all your samples from within Sound Probe before sequencing them in SoundStudio. With Sound Probe and SoundStudio it's quite possible to produce top quality 16-bit tracks with as many sounds and effects as you deem necessary. What you have is the equivalent of an entire studio full of black boxes with flashing lights crammed into your Amiga, even if it doesn't all work in real time.

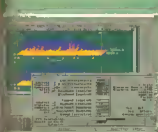
That said, many of the effects will work in real time. The maximum output quality of the realtime effects varies depending on the complexity of the process and the CPU power you have available. You can also set a number of sliders and switches to define how coarse of fine the processing is (whether you use filtering for example) which reduces the CPU load and therefore allows for higher output frequencies. In some cases this can make the difference between having enough power to perform the realtime processing or not at all. These options also come in



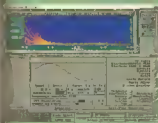
▲ Any of the effects can be chosen from the generic Effects list or picked from the various menus



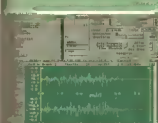
The multi-colored graphic 3D FFT display



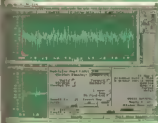
It makes you'll notice how the FFT filter is used.



Here is another 3D FFT display in the computer



Pushing the time-traveling as it is the get



Now you'll be able to work with the results

handy for reducing waiting times when working with larger samples

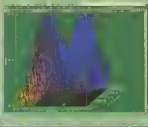
Get lost

As with the previous release, it's quite easy to get lost in the program. There are countless options available at every turn, and while some aims have been reorganised to aid navigation, you still get the impression that things could be presented in a more easily digestible manner. For example, you might have to open three or four similarly entitled option windows before you find the area that includes the switch you need to flick: Sampling, Audio, Audio I/O Control, Project Info, Status, Hardware Settings, Audio Options, Sampler Options, Project Options... which do you pick when you want to alter the sampling device? It's undoubtedly preferable to have more options than less (this isn't a Mac application after all) but at times it does become a victim of its own configurability.

Even so, it's odds on that once you've got things set up for your system you're not likely to need to change them, and who knows in your search for that elusive button you might bump into a few features you never would have discovered.

Sound Probe uses a frame system of windows for everything. The only permanent fixtures are the pull-down menus. Due to the size of a lot of the windows things can get quite cramped unless you have a large screen size. You'll notice that the cover disk demo starts up on your Workbench to ensure compatibility with your system. However, a Productivity as graphics card screenmode is recommended if you can stretch to it as a flicker-free interface screen. Otherwise you'll find yourself can-

The multi-colored 3D FFT displays are now a lot more useful than in the original release. Whereas before they offered an interesting insight into the various frequencies contained in your sounds, they now have more detailed frequency markings on the Z axis. In conjunction with the multi-band graphic equaliser and the various filters, it's now a lot easier to pinpoint and boost or cut specific frequencies within your samples.



NEW VERSION 2

There have been lots of additions, updates, fixes and improvements made around the system. Here are some of the more prominent new features:

- ◆ ARexx controllable
- ◆ 128 band graphic EQ
- ◆ Resonant filter
- ◆ New AHI samples
- ◆ Vocoder
- ◆ Better frequency display on graphs
- ◆ Faster FFT routines
- ◆ Vocal filter

stantly resizing windows and clicking the faint-to-back gadgets as you work, which can be a pain.

Automated ARexx

One of the most potentially powerful new additions to this version is the ARexx support. This allows you to set up scripts to automatically import, process and export files - a particularly appealing feature if you ever have large numbers of sound files that need collating, converting or enhancing. For example, if you were putting together a collection of sound samples to be released on CD for public consumption, you could get Sound Probe to load them all in one by one, maximise their volumes for consistency and then have them saved out in the required file format. If you had a load of sounds lifted from old vinyl records, you could add a DeCrackle process to them too, and maybe Bass Boost and Brighten them if they were from a highly pocked LP.

Overall this is a more than worthy update to an already excellent bit of software. If you're interested in making your sounds that bit better than the rest then this is an essential purchase. While *SampleTime* over the page offers its own individual angle on the sample editing theme, *Sound Probe* has just too much an offer to be ignored. ■
Tony Hagen

SOUND PROBE 2.0

System requirements: 68020 or higher, Workbench 3, 4MB RAM, hard drive

Generally good but there still seems to be more work to be done on the interface and options

It does things that you can't do with anything else, and does what they you can do with anything else

It's good to talk and probably works at it about 10% of the time, but I bet it worked a lot more

OVERALL
An essential piece of software for anyone into sampling

92%

Samplitude Opus

■ See cover disk instruction pages for price and availability details

Like Sound Probe reviewed on the previous pages, Samplitude Opus is a sampling and sample editing system. Unlike Sound Probe it doesn't go all out to emulate every effects unit in the universe but instead sets its sights on offering an environment in which sound quality and professional features are foremost.

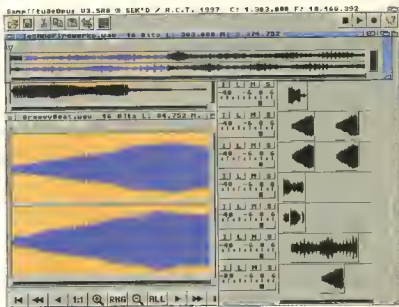
The last time we looked at Samplitude was way back in about 1993 when I first tinkered with it in conjunction with a Maestro sound card. Having since had a Tascam card permanently installed in my A4000 I've been using that same version for the past five years for simple sampling jobs. That's about all that old version is capable of, but these days development of the software has been taken over by ACT (Allrecht Computer Technik) and it's got rather a lot more to offer.

Card compatibility

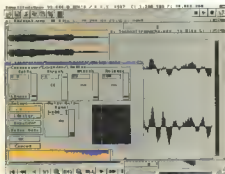
Samplitude can work with a range of sound cards including Tascam Prelude, Maestro and the Amiga's internal sound chip. If you don't have a sound card you can also sample via the parallel port in 8-bits, although to be honest if you limit yourself to 8-bits you're never going to push Samplitude Opus to its full potential.

The focus here is squarely on hard drive recording. While Sound Probe can record to hard drive and edit hard drive files, with Samplitude hard drive recording is the core around which everything else fits. The user

You've got a working version of it on this month's cover disks. Let's take a look at what extras the professional option offers.



▲ The virtual project console lets you to mix and watch waves sample quickly and easily



in mind is someone who has a well stocked Amiga (Zorro) sound card, plenty of RAM, 68060 very fast SCSI drives, CD-R 1 who wants to generate high quality soundtracks for multimedia projects or master commercial quality CD music. This isn't supposed to be a tool to complement the average tracker musician or the occasional sampler dabbler, even though it's got enough under its belt to cater for most of those too.

A typical session with Samplitude Opus would see a number of sections of audio being sampled direct to hard drive in 16-bit, arranged using the Virtual Project manager in kind of big audio clipboard, mixed and

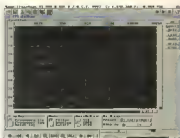
played in realtime during editing of sound levels, listening and other effects processing, then bounced down to a single stereo 16-bit audio track on hard drive. That could then be replayed live from the drive or cut onto CD (with the help of CD burning software).

As you can see from the cover disk edition, there are specific CD creation features included, such as direct importing of raw CDDA data (though not directly from audio CDs), exporting of the same, and also the ability to save out a version of the AIFF sample standard that includes embedded track markers.

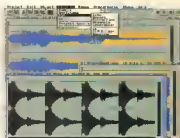
Samplitude Opus is mostly concerned



▲ The FFT graph seems ready for filtering.



▲ More filters are available into the scientific-looking FFT section.



▲ Strange comb reverb type effects are offered by Convolution.

with producing clean results which is reflected in the effects it has to offer.

There are nowhere near as many as in Sound Probe, but ACT promise that they are as accurate and free of distortion as is possible. Along with the basics like cut, paste, reverse and normalise (although strangely enough no apparent Undo), you will find an echo and reverb option with variable settings.

To be honest they're hardly the apex of delay effects but they do the job well enough. There's also a compressor which can be adjusted so as to even out the volume levels of different parts of your samples (ie. to keep vocals or live instruments at a regular level) and a fixed parameter



Hard driven

To get the most from Samplitude's professional hard drive editing features you'll need to get your Amiga properly kitted out for the job. Working with relatively small hard drive samples of around a minute or two in length won't overly tax the average system, but if you want to work with an entire chunk of CD audio (70 minutes or more) you'll need a very fast SCSI interface and a large fast hard drive. You'll need at least twice as much hard drive capacity as the amount of data you intend to work on. A minimum for a full CD's worth then is a 2Gb drive.

It's also essential that your drive is formatted and partitioned for optimum performance with enormous files. Make sure the block size is set to at least 16K. With a smaller block size and anything but the best in SCSI controllers you could find yourself going insane as you wait what seems an eternity for selected sections to be located and played from the hard drive. Then you've got the business of cutting, pasting and processing to contend with. One day soon we'll be able to afford to have 2Gb of RAM on our desktops. I look forward to that day...

Densify function (it doesn't offer any options). One of the most powerful processors is the EQ section. This offers a 2D graph for overall frequency response and also a 3D FFT display. Using these as a guide to the frequencies in your sample, you can then select three frequencies to be cut or boosted by your chosen amount, then see the effect it has on the FFT and of course your sample.

The most interesting feature here is the Convolution effect. It's not explored well in the documentation, but it seems to map certain characteristics of one sound (from the copy buffer) onto another (the currently selected sample). In most cases it sounds as if reverb reflections from the copy buffer are mixed with the main sample, although in other cases the two seem to be melded together in a more subtle fashion. Unfortunately the output level of this effect seems to rise from start to finish, making it difficult to keep the volume of the resulting sample under control.

Take your pick

It's a case of horses for courses whether you're going to find Samplitude or Sound Probe more to your liking. Fortunately for each other they're not both going for the same ground. If hard drive recording and

▲ Recording direct to hard drive is made easier with the level meters and independent left and right gain controls.

editing is a major requirement of the jobs you've got planned then Samplitude Opus is definitely the favourite. With its multitrack mixing and virtual project system it will make your life much easier and given the right hardware is up to the most demanding of audio production jobs. ■

Tony Horgen

SAMPLITUDE OPUS

System requirements: 68030 (including FPU), 2MB RAM, OS 3.11+

Score of 86
There is a real need to get more time-efficient for the professional but gets in the way of things.
Despite this, there are some important and useful features.
Value for money
Priced for the professional market but fairly reasonable considering what it is able to offer.

OVERALL
The best hard drive recording and editing system available

86

Eyetech CDPlus SE

- Price: from £99.95 ■ Supplier: Eyetech ☎ +44 (0)1642713185
 ■ Web: <http://www.eyetech.co.uk>

For Amiga 1200 owners who have not yet joined the CD-ROM revolution, here is the fast and cheap Eyetech CDPlus.

If you still have not got a CD-ROM drive attached to your Amiga, then now is a good time to buy one. Various companies are shipping complete CD solutions for the A1200 at under £100.

Eyetech, purveyors of all things IDE for the Amiga, are joining in on this pricing war with their CDPlus SE systems. They offer a 20x speed CD ROM drive for £99.95 and a 32x speed one for only £20 pounds extra.

The Package

The CDPlus SE package consists of the CD drive itself and Eyetech's EZCD-SE, the economy version of their 4-way buffered IDE adapter and driver software. The CD drive mechanism is housed in a slim-line metal case. It requires and is supplied with an external PSU. The standard version of the drive is shipped without any audio out connections, but as an optional extra you can specify an audio mixer. The is a useful and unusual addition for an external drive and allows you to mix together the audio

output of your Amiga with the CDDA output of the drive. Both the drive mechanisms, the 20x and 32x are manufactured by Lite-On Inc. and are excellent. Fast CD ROM drives have a tendency to sound like a lawn mower but not these, they are whisper quiet.

The drive is hooked up to your machine via the 4-way adapter. This is a device which fits to the IDE connector inside your A1200 and allows you to use up to four IDE drives with your machine. Installation is a simple process, helped by the clear instructions supplied. This latest revision of the 4-way adapter seems more stable than previous releases, although it may create timing conflicts with some hardware. The driver software provided is a registered but



Although this is not amazingly quick, it is quite impressive given the fundamental limitations present. The fact that the results were similar for both drives is because of the bottleneck caused by the A1200's IDE interface. In practice the 32x will be faster, since it has a better seek time (that is, it can locate a required position on the disc more quickly). Tests indicated that for tasks like reading directories the 32x speed drive is about 20% faster than the 20x one.

So, these drives are no slouches but don't expect miracles.

The judgement

There is no question that the CDPlus system is of high quality. But is it worth the money? OK, the extra performance boost given by the 32x drive may not be enough to justify the extra price, and the full driver software and the audio mixer are extra costs - so perhaps this is not such a good deal as it seems? Regardless, the CDPlus even in its basic form, is highly usable and offers an economical way of accessing CD ROMs from your A1200. ■

Richard Drummond

Not fast enough?

The point of buying a 20x or 32x speed CD drive, obviously, is for its performance. So how fast are these drives? A standard (1x) speed CD reads at an average rate of 150 Kb/s. So, theoretically, a 20x speed should read at 3.0 Mb/s and a 32x speed at 4.8 Mb/s, right? Wrong. The speed quoted is actually a maximum speed and will only ever be achieved when the drive is reading from the outside edge of a disc. Add to that the poorly implemented IDE interface that the A1200 is blessed with and things slow down considerably.

The ATA IDE standard that is implemented via the A1200's interface is known as PIO (Programmed I/O) Mode 0. Mode 0, theoretically, has a maximum transfer rate of 3.3 Mb/s and is a non-DMA standard. The means, that basically, the processor is required to perform the data transfer.



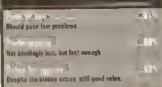
restricted version of Elaborate Bytes's atop device (as supplied with the IDE-Fix package) and the old freeware AmvCDROM filing system (the fore-runner of AmvCDFS). It is easy to install, usable, but slow. By upgrading to the full version of EZIDE software you immediately gain a 30% increase in speed and a lot more flexibility.

The performance

How do these drives perform in practice? In raw transfers tests, when using the full EZIDE software, both drives achieved speeds of about 2.0 Mb/s. (For reference, an 8x drive with the same setup gave 1.2 Mb/s.)

EYETECH COPUS SE

System Requirements: Amiga 1200



OVERALL
 There is no excuse not to buy a CD-ROM drive now

90%

POWER UP



Stop Press
Agreement has now been
reached between **Phase 5**
and **Haage & Partner**
for PowerPC development.

LIGHT MY FIRE



CyberStorm PPC

180MHz, 200MHz & 233MHz PPC
with 060/50MHz or 040/25MHz
All with Ultra-Wide SCSI-3 Onboard
Upgrade Models without 040 or 060 available



Blizzard 603e Power Board

160MHz, 200MHz & 240MHz PPC
with 060/50MHz or 040/25MHz

Designed for use with A1200 Tower Systems

603e+ Model Has Onboard Fast SCSI-2

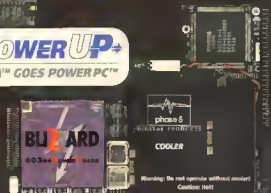
"The essential upgrade for all A1200 users"

"A superb blend of value and power"

"Not to be missed."

"A real bargain."

94%
CU Amiga



Upgrades Available From Blizzard 1240T, 1260 & accelerators
with socketed 040 or 060 CPUs. Please call for details & prices.

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For Pricing Information, See Our Main Advertisement In This Issue

VDC200p Digicam

■ Price: £199.95 ■ Developer: Power Computing © +44 (0) 1234 851500 ■ www.powercam.com

Power Computing follow up their first entry into the Digital Camera arena with another budget wonder.

Like Power Computing's first offering in the digital camera stakes (reviewed in the June 1998 issue), this camera comes from Taiwanese budget scanner maker Mustek. Although a significantly higher specification than the previously reviewed VDC-100, the VDC 200P should not be thought of as Mustek's assault at the high end of the digital camera market more a way in to the bottom end for people who could not live with its feature-free smaller brother.

Structurally the VDC-200P is a big improvement over the cheaper Power camera, larger and better shaped to fit the hand. The camera is simple enough in use too – not as simple as its stable mate, but then this camera has a few more functions than the ultra basic VDC-100.

The most obvious new feature is the LCD screen at the back. You can monitor the image coming through the lens in real time, giving you a rather better idea of what to expect when you press the 'shutter' button. The functions of the camera are also selected through a menu displayed on the LCD screen. While switched to Camera mode, the menu allows you to alter the brightness of the screen, set the self timer, select high or low resolution images and switch the flash on or off. In Playback mode you can switch between a nine picture index view or single picture, and you can delete either the current picture or clear the entire memory.

The software supplied with this camera is a minor update of the same PowerDC software we looked at with the cheaper camera



▲ Images come out rather soft, but the resolution is decent.

It allows you to fetch all the images from the camera or download them singly, the LCD screen allows you to preview the images in memory and download only the ones you want. You can save the image as a JPEG, an IFF24 or a PNG. You can set the panel device and connection speed and can configure your own viewer software or use PowerDC's own. As before you can use PowerDC to take a photo remotely but with this camera you can also set all the camera functions direct from the software. Click on the extended camera functions button and you can switch resolutions, control the LCD and flash, even switch the camera off.

PowerDC is admirably functional and simple, and a lot more stable than the crash-prone PC software the manufacturers supply in the box. The image quality is a step up from the cheaper camera. I suspect that the CCD array is common between the two cameras, and the lens is a great improvement, still low grade and fuzzy. With 2Mb on board, however, there is less compression of the images and it shows



▲ Bright on-light can make have with the low dynamic range of the CCD

▼ But with correct light and a bit of exposure added with post processing, quality can be very decent.



Dynamics

The dynamic range is poor so that bright objects against dark backgrounds tend to burn to white and colours are not too stable, being balanced well for daylight but falling less well with fluorescent or incandescent light. The flash helps out in this but it has slightly too strong a forward response leading to spotlighting and glare. A simple two position waterhouse stop allows you to close down the lens aperture if it gets too bright, but close-up flash or bright sunshine can flood out the image or cause weird discolouration.

The image quality should certainly be sufficient for small images in a DTP document or on a web-page however – look at the examples on this page and make your own mind up. As with the cheaper Power Digital camera, this one majors on value for money. To get these kinds of features you normally have to spend rather more money than this. Image quality is still rather suspect, again not surprising but the price is heading further

towards the territory where you start expecting good image quality. If you can stretch your budget another 60-70% you could afford an Olympus 420L, a much better camera. On the other hand if you're going to have to stretch your budget to afford this camera then do it, it is miles better than any thing cheaper. ■

Andrew Korn

Specifications

- Resolution: 800k pixels
- Memory: 2Mb, gives 50 pics at 320 by 240 or 20 at 640 by 480
- Viewfinders: Optical with simple frame finder, 45mm colour LCD
- Focus: Fixed
- Aperture: f8.0 and f2.8
- Outputs: Digital out, Video out, CF card slot

VDC200p Digicam

System Requirements: 650.0k or better, 10Mb ram min, 386/20 and 286 recommended.

Easy camera, easy software

Software in all you would want, image quality isn't quite

Value for money
Great features at a very low cost.

Good package with acceptable output and a fantastic price.

86

Siamese V2.1



■ Price: £29.99 ■ Developer: Siamese Systems 01525 211558
 * www.siamese.co.uk

Siamese RTG bacomas available at a budget price – but it is serial only.

Regular readers of CU Amiga will be fairly familiar with our positive opinions of the Siamese software. The problem is that a lot of people aren't entirely sure what Siamese would offer them – it is a quite unique product in the world of computer software, and it is often said that without a live demonstration, no-one will really see the value of Siamese.

Siamese V2.1 CD contains a mass of documentation on the Siamese system, including the entire Siamese web site and several digitised "introduction to Siamese" video clips. There is also the Siamese V2.1 software, which is basically the same as the full V2.5 RTG software except that it will run only over a serial link. Installing the software involves a simple installation from CD for both the Amiga and a PC. The two are connected together and the network software configured on both sides. You will of course need a null modem cable – not provided.

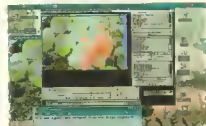
Apity named, Siamese melds your Amiga and your PC together. It is possible (if confusing) to control either computer with the mouse and keyboard of the other. You can transfer files much in the manner of the various PC/Amiga networking solutions and you can even share clipboards, so that you can cut from a document on your Amiga and paste into a document on the PC, or vice-versa. The range of functions to be installed is set up from a nice straightforward prefs program on the Amiga side.

The most intriguing and powerful of these functions is RTG mode. When this is activated you will find that your Amiga screen-mode satedor contains new SiameseRTG screenmodes. When a program opens a screen in one of these screenmodes, the screen is opened up on the PC! The Siamese

client intercepts the screen drawing commands, sends them down the serial cable, and redraws them under Windows. What this means is that you can open your Workbench screen or a PPaint screen, or whatever else uses retrievable screens on your Windows 95 or NT desktop.

How fast?

As the connection is over serial, the speed at which an Amiga screen is drawn on the PC is not terribly fast, even if you are running the system through the fast serial add-on such as the whippet. The way the screen drawing is handled is very clever – all the intuition gadgets are recreated on the PC side, meaning that only the drawing instructions need to be sent. Bitmap graphics have to be sent whole and therefore take a lot longer. Opening Image FX on the PC, the screen gadgets draw very quickly, while the bitmap preview screens are rather slow. When you work with multiple small preview windows, the slow-



down when any individual update has to be drawn is not a problem, while for an AGA Amiga owner, the benefits of opening the ImageFX screen on a large 24bit PC screen are considerable.

The screen redrawing is not 100% perfect, small amounts of corruption occur, especially with MUI applications, but this is a very small price to pay and never worse than slightly annoying. The bitmap slowdown makes something like a PPaint slow but as it works by differential updates, it is almost useable. Over Ethernet, it is quite fast enough. Wordworth, which updates the screen far less intelligently, is unusable. Open it on the PC screen and you can watch it blit grey blobs to the screen for a couple of minutes before it manages to fig-

▲ Siamese lets you open multiple Amiga applications on a nice 24 bit desktop under a busy operating system.

◀ You can even open a Workbench screen and an Open screen simultaneously.

Siamese Ethernet

Siamese V2.1 is in fact a very clever advertising gimmick. It is cheap enough to be tempting to try, useable enough to persuade people that they want it, and slow enough to make people think seriously about upgrading to Siamese Ethernet. With an Ethernet connection, even bitmaps are drawn pretty fast – Siamese over Ethernet is amazing.

Serial will not normally go over 115200 bits/s while Ethernet can drive Siamese at up to 500k bytes a second. If you have an Ethernet card for your Amiga, then the full Ethernet ready software will set you back £99.95. Alternatively you can get it with a hybrid Ethernet card for A1200 or A4000 for £199.95. In either case, Siamese systems will refund you the full cost of the V2.1 CD. Smart move!

ure out a blank page. On the other hand, Postscript works great, especially if you display bitmaps with outlines. Workbench works very well – a clever little touch replaces the backdrop image with one stored and drawn locally so you can have a nice Workbench backdrop without that having to travel over the serial link.

There are certainly imperfections with the Siamese software. I found that the option to mount PC drives did not work on my computer – apparently this is because it clashes with the defcon option in NewIcons. Compared to what author Paul Nolan has achieved with the system, these imperfections seem like petty problems that you can be sure will pass in time. What Siamese does is unique and, rather brilliant. At this price it's not much of a risk, and in my opinion, if you have an Amiga and a PC, you're mad not to even try it out. **Andrew Korn**

SIAMESE V2.1

System Requirements: Amiga with 653.8+, PC with Windows 95, all modem cable

Not bad, but still a little chunky some odd difficulties occur.
 Very slow, but what it does it, amazing.
 Superb price, with money back guarantee.

Best thing to happen to a PC

94



Scan Magic



■ Price: £54.95 (Internal) £99.95 (Internal with flicker fixer)

■ Supplier: Power Computing ☎ +44 (0)1234 851500

• <http://www.powerc.com>

For ages Amiga 1200 users have been crying out for scan doublers. Now the market is awash with them.

A scan doubler is a device which allows you to connect a high quality VGA monitor to your Amiga and be able to view the native video modes on it. In the June issue of CU we reviewed the first such device for the A1200 to appear on the market, manufactured by Micronik. Here we look at two more from Power Computing.

Power's Scan Magic comes in two internal versions: one with and one without a flicker fixer. Both allow you to display NTSC and PAL screens on a VGA monitor, while the flicker fixing version also gives rock steady interlaced modes as well.

Plugging them in

Both versions of Scan Magic consist of a small circuit board connected by a piece of ribbon cable to a double sided socket. One side of this socket plugs into the RGB port of your Amiga, while the other is a standard VGA connector into which you connect your monitor. This circuit board fits over the Lisa chip on the motherboard of the A1200, the custom chip responsible for generating the AGA video signal.

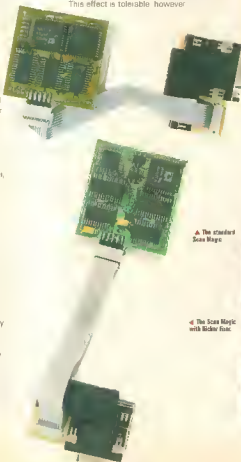
Installation of Scan Magic is a similar process to that of the Micronik scan doubler, although simpler and faster since it has only one board. Unless you have a tower-cased A1200, though, you have to dismantle your machine, removing the keyboard, floppy drive and the shield. You are also left with the problem of what to do with the cable that joins the two halves of the Scan Magic together. Obviously, this is a device more suited to a tower system.

Do they work?

Once installed both versions of Scan Magic works invisibly, giving crisp, steady images with the non local video modes. The display quality is on par with the Micronik devices but a similar flaw occurs: no black borders. That is, the black border effect produced by commodities such as MCP is bypassed by both devices. Not an essential flaw, but annoying.

The flicker fixing Scan Magic does a creditable job with interlaced modes, too. For static images it is perfect. For moving

images, however, there is a discernable flicker. This is a consequence of the way interlaced modes and the de-interlace function. A complete display is built up in two monitor refreshes. In the first frame only the odd rows are produced, whereas the even rows are filled in on the second frame (and so on in alternation). On moving the mouse pointer, for example, when the second half of the pointer image gets displayed the pointer has moved from where it was when first half was displayed, hence, the flicker. This effect is tolerable, however.



Living with AGA

So you have got yourself a flicker fixer and a nice VGA monitor. How do you overcome the two main limitations of AGA: namely, its poor speed and its limitation to 2Mb of graphics memory.

1. Open WB on a Multiscan Productivity screen to get a solid 840x480 display. (If you have a flicker fixer you may prefer, say, PAL leed at 700x500.)

2. Don't make screens too deep. Lots of colours will slow the system down and consume memory. If you have a fast processor, 64 colours is quite usable.

3. Use a WB replacement. Workbench's allocation of drawing pens is poor. Replace it with, say, Scrolis, to make better use of the limited number of colours.

4. Get a copy of FBlt. FBlt is a hack which replaces some of the OS blitter functions with CPU functions. This has the benefit, for fast processors, of speeding up blitting operations, it also gives you the option of forcing named programs to use Fast Memory for non-displayable bitmaps, thus conserving precious Chip RAM.

Are they worth it?

Both versions of Scan Magic are excellent, the standard version especially so because of its low price. The flicker fixing version is worth the extra cash if you need to interlace, it does allow you to have large, steady screen displays, but you will have to live with the update flicker. ■

Richard Drummond

INTERNAL SCAN MAGIC

System Requirements: A1200 and SVGA monitor

OVERALL

A cheap way to get a high quality screen display

90%

INTERNAL SCAN MAGIC WITH FLICKER FIXER

System Requirements: A1200 and SVGA monitor

OVERALL

The best Amiga display this side of a graphics card

92%

Catweasel Mk II

■ Price: £49.00 ■ Developer: Individual Computing ■ Supplier: Golden Image ☎ 0181 900 9291

The peripheral that no-one can manage to spell correctly gets a whole new incarnation.

I used to be so simple when the only annoying thing about Amiga floppy drives was the clogging. But once it became clear that the rest of the world was using high-density floppies, Amiga owners discovered that Poole is incapable of handling high-density floppies at full speeds. This was a bad thing, and has condemned us all to a life of expensive solutions for accessing HD floppies so important to talking with PCs and Mics.

The advent of cheap removable media like the Zip has taken some of the sting out of this necessity, but it's still handy to have

Calling the Clock Port

Two of the biggest complaints about the A1200's design were the lack of a high-density floppy drive and the lack of a battery-backed clock. Instead, the computer came with a small 22-pin header where third-party clock modules could be placed. The Catweasel Mk II takes advantage of one problem to solve another.

By now just about everyone has a clock on their accelerator card anyway, so that clock port is tantalisingly idle. In order to use the Catweasel Mk II on the clock header you need the "correct" header. The most common is a 22-pin version which sits in the middle of the machine, near the keyboard connector and (at least) on some models) under a small independently removable RF shield. Some machines have the header closer to the hard drive end it may consist of 40 pins, or may not exist at all in which case this option isn't available to you.

Like the original Catweasel, the Mark II can also live on the IDE port, but that requires a custom cable for A1200s and means you're hogging a spot on the IDE bus, although there is a passthrough, if you connect to the IDE bus, you will need to power the Catweasel by plugging in a supplied cable to a hard drive power connector.

Word of warning

The Catweasel was incompatible with the Apollo A1200 030/40 accelerator board but did work with a Blizzard 060. Check if your card disables the clock header in an A1200.



▲ The only PCB which has a cat's tail clip

Therefore, the IDE option is not recommended for desktop A1200s (heat and space are also serious concerns). For towered 1200s or other machines with an IDE bus, the better power supply should be sufficient.

The clock header provides sufficient power for the Catweasel. The manual states that you can use the power connector if necessary, but I found that plugging it in actually caused horrible system instability and made the unit extremely hot. The Catweasel requires drives to run, which are installed off of a standard Amiga floppy disk (meaning you shouldn't throw away your old drive until you install the Catweasel software and make sure it's functioning).

Getting your floppy in

The primary use of the Catweasel is to replace the Amiga floppy with a cheap PC high-density floppy drive. Of the various manufacturers out there, the developers have tested most, with Tests coming highly recommended, most others offering acceptable performance, and Mitsumi/Newtronics drives singled out for unreliable operation, particularly on disk writes.

You should be able to find a non-Mitsumi drive for relatively cheap. With a little bit of work you should be able to get many models to live in desktop A1200 models and of course for other machines they will mount in a standard drive bay. The Catweasel treats floppies in an odd fashion. Rather than calling your floppy DF0 (the first drive is called TD0 for double-density (880K) floppies and TH0 for high density disks. Reading PC disks requires the use of PD0 and PH0 according to Aside from being a bit unconventional, it

also clutters your Workbench with "bad disk" icons. In speed tests, the Catweasel performed substantially quicker on HD floppies than an A4000 HD drive (because it can read at full speed) but slightly slower on 880K disks. Because the Catweasel requires drives it is not a drop-in replacement for DF0, although you can run a patch to allow the Catweasel to act as a bootable drive. Still, hard coded programs seeking DF0 or particularly nasty copy protection routines will not be happy with your Catweasel drive. The Catweasel has some handy bonuses. One is the ability to add a

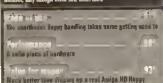
5.25 inch floppy which has a very nice 1541 filesystem (for access to C64 disks) as well as the ability with some extra tinkering, to read Amiga, PC, Atari and Apple floppies.

However since most PC 5.25" disks cannot read the back sides of single-sided 8-bit disks properly (due to index-hole issues) you may need to make a modification to whatever drive you pull off the shop heap. Also, for 3.5" floppies in high-density mode there is a custom format called "XTRA" which allows over 2 megabytes on a standard HD floppy disk, but since nothing but another Catweasel can read it (this would primarily be for personal archiving. Because it's not a DF0 replacement, the Catweasel isn't a perfect option for Amiga owners, but with the redesign and the drop in price since last year, it's become a very attractive option. ■

Jason Compton

CATWEASEL Mk II

System Requirements: A1200 with 22-pin clock header, any Amiga with IDE interface



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PD.net

PD.net

Dave Stroud: has modem, will download. Here he is with another selection PD and shareware available from the Internet.

BallMaster (demo 1)

Type: Game

Available from: Aminet game/demo/BallMaster.lha

Size: 103k

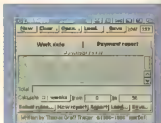
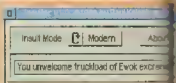
Requirements: Any AGA or ECS Amiga, BallMaster

Master of the bells, or just a load of the same? Well, there's a lot of them (bells, that is). You have to rotate wheels with holes in to get the bells to drop into the holes. You need to fill each wheel with four identically-coloured bells to turn a little light in the middle of each wheel green (instead of red) and complete each level. Er, that's it. If all that sounded a bit uninspiring, then I guess we're on the same wavelength. You see, BallMaster isn't very interesting. It doesn't look attractive and doesn't sound attractive.

You load it up, and you see a bright yellow topaz font (did I mention I hated that yet?) on a black low-res screen telling you that "Autumn Design presents BallMaster... Demo Release One. Press mouse button to continue... (ESC to quit)" My gut feeling was to hit "Escape" there and then - to save myself from the despair that would usually follow such a bland introduction, but I thought "No, wait a minute. There might be something to this game that I'm not

expecting. Something truly awe-inspiring which will capture my attention. It would be wrong to judge a book by its cover," etc. I pressed the mouse button. Another screen of ghostly yellow Topaz! Aieee! And this is the AGA version! I pressed it again, hoping that there would be something to reward my blind faith. A red screen with brown wheels and different coloured balls rolling backwards and forwards. Oh, I'm really sorry to have to say this, but as it stands at the moment, BallMaster just isn't very interesting. Yes, it is playable (in that it's not broken), but that's about all. With an overhauled on the graphics, sound and presentation, it would stand a much better chance of keeping me occupied for more than a few seconds.

However, it is only a demo release, so it may well improve beyond all expectations. Don't let me put you off from making those improvements, Dami - I'd like to see this game in its final incarnation and be proved wrong! **



GetPaid 1.1

Type: Payroll calculator

Available from: Aminet biz/misc/GetPaid.lha

Size: 230k

Requirements: MUI 3.3+, Listtree mcc 17.0+, retools library 38+

Do you spend countless hours at work these days? Don't know whether you're coming or going, clocking out for your lunch break, tea break, or because you've finished for the day? Forgotten when and how much you're due to get paid each month? Wish you didn't have to work at all? GetPaid won't tell you if you're in the wrong job, but it might prove to be an invaluable piece of software for those of us who work on a schedule with varying rates of pay depending on the time of day/week.

By typing in all the information about how long you've worked each day and specifying the rules which determine how

much you should be paid per hour depending on when you work, GetPaid will do all the hard work for you in working out just how much money you're entitled to.

The main program window provides tabs for every month of the year, and reports can be generated for a specifiable range of weeks or months. Calculation is done via a programmable set of rules, and is therefore much more flexible than it first appears. Rather than specifying one or two fixed rates of pay, it is possible to specify different rates for different times of day, days of the week, even specific days of the year. GetPaid features an API which will allow

further expansion in the future. For example, currently, reports can only be saved in GetPaid's unique format, or as plain text. Thanks to its API, different file formats as well as new rules for pay calculation can easily be added to the program.

Reading the documentation is thoroughly recommended, as it will undoubtedly take a while to get used to the intricacies of GetPaid's workings - a short tutorial could really help out here. GetPaid's author isn't sure of the program's future, so if you use it, be sure you drop Thomas a line to let him know you're interested. ****

Insulter 1.0

Type: Stress-reliever

From: Aminet:util/misc/insulter.lha

Size: 21k

Requirements: A sense of humour?

If you know what it's like to get really annoyed with people on Usenet shouting, complaining, flaming or spamming in excess, you could well appreciate this little program. The first insult it threw at me when I loaded it up might not have been out of place in the Star Wars trilogy. Imagine Han Solo saying, "You irresponsible stack of Wookiee hair!" at Chewie (He probably did at some point, it

just didn't make it into the final cut). Not only does Insulter gleefully hand out toilet humour one-liners, it can do it in "Modern" or "Classic" tongues. "Thou bawdy sour-faced gndrgnol!" "Shakespeare it may not be, but a welcome reliever of frustration and source of small amusement it is. It's even got an ARexx port, so you can integrate it with your favourite Email or News software and dish out various insults on certain individuals who don't know when to shut up. Ah, what fun.

It's a shame that Insulter doesn't appear to come with datfiles which can be changed or added to, because as it stands, it will tend to repeat itself half the time rather than give you a truly wide variation of insults. Despite this, it did manage to come up with, "You Windows using crate of airwax," so the fact that it's based on an old MS-DOS program obviously didn't stop Paul from experimenting with new phrases.

Finally, Insulter will even use your Amiga to insult you audibly if you so wish, as long as you have the Amiga OS's "speech" facility. Quite why, only Paul knows. I know it's not the most earth-shattering of utilities to ever grace the Amiga, but it's fun, light-hearted and above all will at least bring a smile to your face. ****

MUI CD Player 1.12

Type: CD Player

From: Aminet:disk/cdrom/mnicd.lha

Size: 169k

Requirements: MUI 3.3, NList mnc 0.48, ATAPI/SCSI/CD32 compatible CD-ROM.

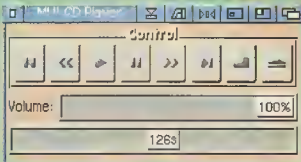
If you haven't already got yourself a CD player for your CD-ROM drive (something which nobody should be without these days) then MUI CD Player is the first stop you should make. I won't say anything about it needing MUI, as that should be plainly obvious.

Instead, I'll talk about the new features of version 1.12 like balance control, position slider (which makes skipping to a particular place in a track as easy as you could possibly want it) and a new library for ATAPI/SCSI devices.

An installer script has also been provided as from this release, and it makes setting up the program to work on your CD drive simply effortless, working flawlessly on my machine as soon as it had been installed. Lovely. The included CD Manager is also feature-laden whilst remaining intuitive, providing the ability to edit disc information, search through all or part of your CD collection for keywords and import files from other CD players, saving you typing in all that information a second time if you decide to move from your regular brand of CD player to this one.

The button images are just IFF brushes, so you can make your own if you don't like the look of the four sets provided in the archive, and a program can be saved for each CD, so that tracks are always played in a specific order. If there isn't a program specified, selecting the "Auto MainProgram," "Auto Shuffle," and "Auto Play" options will play all tracks in a random order as soon as a new disc is inserted. With all the features of version 1.12, it's hard to spot any missing features.

That are desperately needed. It's all there, and a quick flick through the documentation is all you need to discover how to do anything which isn't immediately obvious. ****

**Best of Aminet**

Several small but useful tools have found their way onto Aminet this month, util/sys/QuickROM.lha (12k) being the first. This is one of those utilities which copies the Amiga's Kickstart into fast memory, and claims to speed up the O.S. as a result. New on version 36.08, this is QuickROM's second Aminet release and sees the addition of a Workbench-friendly version which can be placed in the WBStartup drawer or double-clicked on to activate/deactivate the program at will. Due to the nature of QuickROM, it requires either an '640 or '680-equipped Amiga with a Memory Management Unit (MMU) to be of any use.

The second utility is util/misc/Skimmer.lha (84k) which provides another bonus for your system by searching for libraries that are no longer required by the programs that you use. These shared libraries can build up quickly on a system where lots of different programs are installed and deleted on a regular basis, and it's hard to tell which of them are still required at a later date. Skimmer makes a list of all these libraries, then scans all files on your hard disk that look like executables. When it's finished, you are presented with a list of all libraries that may not be required any more. You can then choose to delete or archive them (the latter of which is the safer option) in order to tidy up your lib: archive.

Two more "simple but effective" tools are util/wb/Clock.lha (15k) and util/wb/WarpWB12.lha (10k). The former is yet another Workbench clock, but deserves a mention for not being bloated by seemingly infinite options. Simple, but effective - just like WarpWB, which helps to keep your Workbench screen tidy by closing old windows when you open new ones. Finally, mod/mpeg/breakfast.lha (85k) seems like an apt name at the time of writing. This 56 second long mpeg tune from Northern California's Experimental Media Research Laboratory features piano, bass, drums and trumpet and probably wouldn't sound out of place in a jazz club. Mmmm, great.



PD.post

It's Richard Drummond, with another luvv-erly bunch of useful PD games and utilities available on disk.

PD.post

Chaos V3.3

Type: Graphics/mathematical application

Available from: Online PD, Unit 5, Embassy Building, 51A Pierceland Road, Formby,

Liverpool L37 7DG

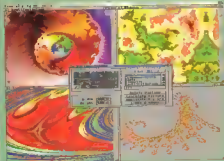
Tel: 01704 834335

Price: (3 disks) £2.25 plus 75p P&P per order

By Martin Pinget, purports to be the last word in chaos and fractal exploration. Fractals are experiencing something of a renaissance - thanks to the prevalence of fast CPUs and colourful graphics displays - and ChaosPro is the Amiga's offering as a state-of-the-art tool for navigating this complex domain. It is aimed as a rival to tools like Fractint on the PC (which has now been ported to the Amiga), but outclasses this product easily.

What is immediately mind-boggling about ChaosPro is its sheer scope and power - and the fact that it is freeware. It boasts features like full multi-windowing and multi-threading, the ability to scroll and zoom images while they are still being rendered; a four-mule editor, 3d transformation and animation tools, 24bit IFF and graphic card support; and an ARexx interface. It can generate Julia and Mandelbrot sets, Lyapunov Spaces, Plasmies, Bifurcation Diagrams, Lindenmayer Systems and much more.

Although ChaosPro is not the fastest fractal generator on the Amiga, the fact that it is multi-threaded makes this fact irrelevant. It is quite possible to pin-point and blow up an area while it is still being drawn or even to work on a completely different image at the same time. This makes ChaosPro a very efficient package to use. The only real limit is your machine's processor power and memory and hence this program would benefit considerably from a high specification machine. The minimum requirements are an 020 with FPU and 2Mb of memory, but this is unrealistic to perform anything useful.



Nevertheless, ChaosPro is excellent. It is one of those pieces of software that you will think of for ages. If you have an interest in mathematics, would like to create some stunning images, or just want something to show off the hardware power of your Amiga, this is the program for you. ***



EdPlayer V2.1

Type: Module/player utility

Available from: Underground PD, 54 Cammell Close, Shoburyness, Essex

SS3 9YZ

Tel: 01702 295887

Price: £1.50

EdPlayer is a module player for NoiseTracker, Pro Tracker or MED modules. Visually it looks like a CD player and this resemblance extends to the interface as well.

The version I was supplied with lacked any documentation. This is not too much of a problem since anyone can operate a CD player and the program has online help, but the user is left with no information on EdPlayer's ARexx port. EdPlayer opens only on a PAL screen, which is limiting, but it



does have lots of other options, a set of controls for MIDI, Filters, Tempo and programmability.

Despite its limitations EdPlayer is a visually attractive and useful way to play your collection of modules. ***



Galaxians V1.3

Type: Shoot 'em up game

Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester, M26 2SH

Tel: 0161 723 1638

Price: £1 plus 75p P&P per order

Most of our readers should be old enough to remember Galaxians in the arcades, so this title needs little introduction. Galaxians V1.3 by Kevin Gallagher is a near perfect conversion – graphically and sonically – of that old coin-op classic. Enough said, really.

My only complaint is that, because it is written in AMOS, it will not multitask with the rest of your system, it would have been a great little diversion to occupy time when you were waiting for your mail to download or for that latest C bohemoth to compile – but sadly no, this is not possible. Still, it's a good game.

If you want a dose of highly playable nostalgia, you could do be worse than get a copy of Galaxians. ★★ ★



Assimilation

Type: Shoot 'em up game

Available from: Online PD, Unit 6, Embassy Building, 51A Piercefield Road, Formby, Liverpool L37 7DG

Tel: 01704 834335

Price: 75p plus 75p P&P per order

The creators of this game, Fullspeed Creative Development, were also the creators of the commercial game Virtual Karting. This may give you some idea what this, a freeware effort, is like. Assimilation is a sideways scrolling shoot 'em' up with all the usual clichés of the genre. There are attack waves, power-ups and end-of-level baddies, but no plot.

Graphically the game is unimpressive. The uninspired and drab use of colour makes it look like it is running on a Commodore 64. In fact, this 8-bit feel extends to the gameplay as well. The only novelty is the unusual addition to the control method of your spaceship instead of just moving your ship up or down when the joystick is pushed up or down, the pitch of your ship increases and decreases as well.

On the whole Assimilation is a competent, but unremarkable game. At this price, though, it is still worth a look. ★★ ★



FotoFit 98

Type: Novelty

Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH

Tel: 01617 231638

Price: £1 plus 75p P&P per order

CU's deputy Editor, Andrew Korn, was fascinated by this program. He would claim that it is because he is an artist, but I think it is just that he hasn't grown up yet.

FotoFit allows you to emulate the identikit process used by the police to identify criminals. That is, you can build up an image of a face using standard parts or features. For example, you may choose a particular head shape, hair style, nose shape, etc from a supplied set. That is just about it – not stunningly useful, but amusing.

There are a few glaring omissions with the package, although it allows you to print out your efforts, you cannot export them as picture files. Also, a few standards tools, such as resizing and stretching of images for example, would

be a bit more useful. Nevertheless, if you are in need of a cheap laugh, then get yourself a copy of FotoFit and make some unflattering likenesses of your mates.

MajorBank V1.91

Type: Business Application

Available from: Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester, M26 2SH

Tel: 0161 723 1638

Price: £1 plus 75p P&P per order

If your cash flow is a catastrophe and your fiscal planning a fiasco, why not let your Amiga take care of your budget? MajorBank is designed for just this purpose: it's an accounts package to help you manage your personal finances.

The metaphor that MajorBank employs is similar to that of Digite's Money Matters. You can set up a number of accounts, say one for your current account, one for your Visa, another for a loan, etc. You can then manually enter transactions for each debit or credit to the accounts; or you can define automatic transactions which are applied at regular intervals (like salaries, direct debits, etc). To each transaction you may apply a category to help you see where your money is going. MajorBank also offers tools like the cutting, pasting, searching, sorting and graphical display of transactions. It allows the printing and the importation and exportation in various formats of data. This freely distributable demo version is limited to 100 transactions. The full version is available from the author, Donat Michel, for \$20 (about £12.50).

The user interface of MajorBank is well thought out and all the program's functions fall readily to hand. The GUI is realised in the ClassAct style, which is none too pretty, but features like its adaptiveness to font and screen size mean it is a big improvement over Money Matters. The account transactions are all shown in one listview on a backdrop window, access to any of the other (up to 10) accounts that you may have open is via a tab gadget. A consequence of this is that you may view only one account at a time, whereas I would have preferred a multi-windowed approach.

MajorBank will not make you a millionaire but remains a useful application. ★★ ★



Art Gallery

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Art Gallery, CU Amiga, 37-39 Mill Harbour, Isle of Dogs, London E14 9TZ.**



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print shop to you, guv!) – you will never see your work looking so good! If you want to enter a picture into Art Gallery, either email it to artgal@cu-amiga.co.uk or post it in on disk to our normal address, marking the envelope Art Gallery.

We recommend PNG format as it saves a lot of disk space, but alternatively GIF or IFF are fine.

• "Jpeg" drops image quality so avoid where possible – also never use for images with 256 or fewer colours.



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Amiga Circleclub NZ

Location: Unionville New Zealand
Contact: Annatto Lachard
Telephone: +64 03 330232
Meeting times: Second Tuesday of every month 7.30 pm
Places: Shirley Community Centre, Shirley Rd
Aid fee: ACP PO Box 35-107 Chatterbox, NZ

Amipack

Location: World Wide - An Amateur Radio Amiga Group
Contact: Phil Carson
Email: DJKus@Carson.nra.net
Telephone: N/A
Meeting times: TBA
Places: On the Amateur Radio Packet Network
Address: 16 Belgrave Avenue, Benger Co Down, N Ireland
BT19 6XA

Waaalande

Location: Bruguer
Contact: Tony Moss
Email: waaalande@bt.com
Telephone: +32 (0)374 1319
WWW: <http://titan.gba.be/~waaalande>
Meeting times: 12 meetings per year
Places: We have 6 Amiga clubs in Bruguer - Antwerpen, Merksem, Antwerpen, Antwerpen, Merksem, Antwerpen
Address: Lepelstraat 11, 9140 Standaard Bruguer

Wigan/West Lancs Amiga User Group

Location: Wigan/West Lancs
Contact: Simon Brown/Ralph Weiss
Email: sam@wigan.co.uk
Telephone: Simon: 01927 402201 or Ralph: 01695 623865
WWW: www.wipg.co.uk/~sam@wigan
Meeting Places: St Thomas The Martyr School East Highgate Road, Up Holand Lancs
Address: 29 Woodcock Road, Appleby Bridge, Wigan, WN6 9UR
52 Highgate Lane, Up Holand, West Lancs

Alpha Software

Location: Newcastle UK
Contact: Gareth Miffin
Email: gary@alpha.net.uk
Telephone: 01670 715454
WWW: <http://www.users.globalnet.co.uk/~gary>
Meeting times: 8.30pm
Places: IRC: #AmiRC GalaxyNet
Address: Alpha Software, Gareth Miffin 113 Cotton Way Colingwood Grange, Clonmeland
Northumberland, NE23 6EZ UK

Convergences Internationales

Location: International
Contact: Ben Clarke
Email: amigaworld@convergence.org
Telephone: 0855 985959

WWW: www.convergence.org
Meeting times: Born (GMT) Wednesdays and Sundays
Places: #amigaworld (IRCnet)
Address: 48 St. Gibbons Road Bouma Lancs United Kingdom

Amiga Club GAG (ACG)

Location: Genk, Belgium
Contact: Bert Vanhulster
Email: amigo.club.genk@skynet.be
WWW: <http://users.skynet.be/amigo/acg>
Meeting times: every 1st Sunday of month
Places: Cultural Centre of Genk meeting

room 1

Address: Weg Naar Zwartberg 248 B 3600 OCP/LABEEK BELGIUM
Rebus IRC
Location: Poland
Contact: Slawomir
Email: slawomir1@polska.oni
Telephone: +48 91 357184
Meeting times: TBA
Places: unspecified
Address: 5 Maciejewicza 127 71004 Straszyn 16, Poland

National Capital Amiga User Group

Location: Washington D.C. USA
Contact: Fabian Jimenez
Contact by: Phone (please send us your phone number: Fabian)
Telephone: 301/924-0750 (10pm - 1am EST)
Meeting times: 12 noon EST
Places: Daily Madison Library
Address: Folium Jimenez MCAUSA
PO Box 12380 Arlington VA 22209 USA

Amiga World Special Interest Group

Location: Athens, Greece
Contact: Mantis Mantonakis
Telephone: 301 4022910/3012019
WWW: <http://www.namgrlink.org/amiga>
Meeting times: 6pm Saturdays Places: Athens
Address: Mantis Mantonakis Gnomon 1147 12324 Delphi Athens Greece

Amiga Forever 1

Location: Hampshire
Contact: Stuart Kent
Telephone: 01753 851842 all day
Meeting times/Places: TBA
Address: 101 Ewell Way Totterton
Telephone: Hants SO40 0PD
Mutual Amiga Computer Enthusiast
Location: Bursfield Newcastle, Australia
Contact: Ken Woodward
Email: kowdow@nsw.net.au
Telephone: 51er working hours
Meeting times: 7pm 1st & 3rd Wednesdays of month
Places: Bursfield Bowling Club
Address: 60 Corriey Avenue Now Lambton Newcastle, NSW Australia
4758 OK

Krakatt, Surrey Amiga User Group

Location: Surrey
Contact: Rob Gilbert
Email: gilberts@talk21.net
Telephone: 01332 873336
WWW: www.craike.com
Meeting times/Places: Monthly (TBA)
Address: 10 BRUX Road Overhush Surrey KT9 6JK

Canberra Amiga Users Society Inc

Location: Canberra, ACT Australia
Contact: Alex Cameron (Secretary)
Telephone: 02 6286 2966
WWW: <http://www.apit.net.au/~james@CALUS/>
Meeting times: 2nd Thursday of the month 10pm 8pm
Places: Woden Town Centre Library (Entry - The Elm Cafe)
Address: 2165 250320 (after 8pm)
Telephone: Canberra Amiga Users Society
PO Box 596 Canberra ACT 2601 Australia

XCAD User

Location: N Ireland
Contact: Tony McManus
Telephone: 01862 250320 (after 8pm)
Meeting times/Places: TBA
Address: 11 Lymmy Drive Omagh Co Tyrone BT78 5LL
ICPUG SE Computer Club

Location: Biggin Hill Kent

Contact: Len Bader
Telephone: 01885 813 618
Meeting times: Thursdays 8-10pm
Places: Biggin Hill (phone for details)
Address: 55 Rockley Rd, Orpington Kent BR5 4JU

Coleherst Amiga Forum

Location: Colchester Essex
Contact: Patrick Mead
Telephone: 01206 212 894 (Mon-Fri)
Email: pjm@colherst.com
Meeting times/Places: TBA
Address: B Windmill Ct, Colford Colchester Essex CO6 1LH
Dart Amiga Club
Location: Dart Kent
Contact: John Worthington
Telephone: 01304 367 592
Meeting times: 7pm Fridays
Places: John Ambrianne Hall Mill Hill Dart Kent
Address: 100 Trinity Place Deal Kent

Amiga Service

Location: Charnley, Belgium
Contact: Hoot Raphael
Telephone: 00327 458 244 (8am-6pm)
Meeting times/Places: TBA
Address: Ring D'n'Verd 53 1810 Charnley Belgium

Extreme Coders

Location: Sheffield
Contact: Mark Johnston
Telephone: N/A
Meeting times/Places: Contact for details
Address: 1st Floor 145 Upperharpo Rd Upperharpo Sheffield S5 9EB

Stoke Amiga User Group

Location: Stoke on Trent Staffs
Contact: Paul Shelly
Telephone: 01752 833 219
Meeting times: 7-9pm Wednesdays
Places: Jostor Public House, Bridgford Rd
Address: 18 Houlsworth Drive, Feggy Hayes Stoke on Trent, Staffs ST6 6TG

Amiga Falcons

Location: Malmö Sweden
Contact: Carl-Johan Rindhart
Telephone: +46 40 933212
WWW: <http://www.olgnet.se/~mmsa/amigafalco>
Address: Amiga Falcons, c/o Carl-Johan Rindhart, Västergården 9 56 212 2B Malmö SVEDEN

Finch Amiga User Group

Location: Finland
Contact: Jarmo Siren
WWW: <http://finland.amiga.fi/~sark/>
Address: Jarmo Siren Orimattila 2 F 17 02760 Espoo FINLAND

Amiga Computer Enthusiasts of Elkhart, Indiana

Location: North Western Indiana USA
Contact: Gregory Denner
Telephone: (219) 876 8543 (after 5pm)
WWW: <http://www.elkhart.com/amiga/indiana.htm>
Meeting times: Second Saturday of the month
Places: 28728 Hampton Woods Dr Elkhart IN 46514

Address: 62300 Pemberton Lane Elkhart, IN 46516 USA

Photogenics & Image/FX Groups

Location: San Jose La Jolla, Essex
Contact: Spencer
Telephone: 01375 5446 14 (9am-9pm)
WWW: <http://www.photogenics.com>

<http://web.msknline.co.uk/spencer/jays/ontario.html>
Meeting times/Places: TBA
Address: 44 Brampton Road Covingham Barton1011 Hope Essex SS17 7NR

No Specific Name

Location: Greenfield Community Centre London
Contact: Richard Chapman
Telephone: 0181 999 9999 5pm-8pm
week all day at weekends
Meeting times: 7pm 10pm Thurs
Place: Greenfield Community Centre
Address: 95 Meadow Road Easting London W5 1NR

AmiTech Amiga Users Group

Location: Dayton Area Ohio USA
Contact: John Feigelson
Telephone: 0537/867 8641 After 8pm ES
WWW: <http://www.noatpcc.com/AmiTech.htm>
Meeting times: 2nd Saturday of the month 7-10pm

Places: Huber Heights Library
Address: AmiTech PO Box 262684
Cincinnati OH 45226-0684

South West Amiga Group

Location: South West England
Contact: Andy Mills
Telephone: 01273 830703 (7-10 30pm)
weekdays anyone weekends
Email: swag@home.nor.com
WWW: <http://www.hatira.nor.com/swag>
Meeting times/Places: Every 1st Thursday of the month at the Lamb & Flag, Cribbs Causeway Bristol from 8 30pm (invitation to nonfilm venue first)
Address: 51 Whitcombe Gate Gardens, Whitcombe Bristol BS14 0NF

Tuggerah Lakes Computer Users Group

Location: Central Coast NSW Australia
Contact: Daniel Korman
Meeting Times: 1st & 3rd Thursday of every month
Places: Baskerville Public School
Address: PO Box 669 Tuggerah NSW Australia 2263

Tuesmen Commodore Users Association Inc

Location: Hobart Australia
Contact: Eric Fitzhugh
Telephone: (0181) 120 787
Meeting times: 7.30-9.30pm, 3rd Wednesday of the month
Places: Contact for address
Address: GPO Box 873 Hobart GPO TAS 7001

University Place Commodore Home Users Group

Location: Tacoma Washington USA
Contact: Jim McFarland
Telephone: (253) 265-3476 comm/ps
WWW: <http://www.helix.com/~red-beard/ucphug/>
Meeting times: 4th Thursday evening of each month
Places: Fircrest Community Center Tacoma WA
Address: PO Box 11191 Tacoma WA 98411-0191 USA

R.A.V.A.

Location: Alkmaar the Netherlands
Contact: Poland do Herder
Telephone: Wierpo-art internedone? Ask me for my number
WWW: <http://www.ravacom.nl/~maacore/ra.html>

Meeting times: 12 times a year
Places: **Altmeir**
Address: IL de Herdass, Ewalsen 36
1-2 GM Hesp, The Netherlands

Virus Help Team - Norway
Contact: Helge Syre
Telephone: +47 901 75526
WWW: <http://home.sci.no/~vst>
Address: Røynevigveien 40
N-2000 SKUDENESHAVN

WACCD West Midlands
Contact: Luke Stowe
Telephone: 0956 467596 (after 10am)
WWW: None yet
Meeting times: 8pm-11pm
Places: Earlsgrove Methodist Church
Address: 9 Trosseuts Rd
Maurit North Coventry
CV3 7DU

Amiga
Location: Istanbul
Contact: Gavena KAPLAN
Telephone: 09022163205916
WWW: <http://www.medynet.com.tr>
Meeting times: Two a month
Places: Anywhere
Address: Ortaklar sok. No 1 Hayat apt.
2 81000 Gortepelistanbul
Turkey

Commodore Computer Users Group
Danmark
Location: Brisbane Australia
Contact: Barry Blake
Telephone: 0132871700
WWW: <http://www.powerup.com.au/~reslin>

Meeting times: 1st Tues of month 7-9pm
2nd Sun of month 12pm to 4pm
Places: St Lawrence's College
62 Stephens Rd. S Brisbane, Qld
Address: 3 Conella Court, Eagleby Gold
Coast Queensland 4207 Aust

Ayrish Amiga Society
Contact: Irvine Aythorpe Scotland
Contact: Maidland G Dale
Telephone: 01292 267555 or 01294 715535
Meeting times: Wednesdays
Places: Achnac Community Centre
Inverke
Address: 49 Belmont Road Ayr
Scotland KA7 2PE

West London Computer Club
Location: West London
Contact: Alan Pavitt
Telephone: 0181-832 1856
Meeting times: 1st and 3rd Tues of month
Places: Duke of York Public House
Address: 19 Halkett Tower Park Rd East,
Acton London W3 8TZ
Duklin Amiga Users Telephone
Hafnia

Location: Dublin Ireland
Contact: Eddie McGinley
Telephone: +353-01-6236903
WWW: <http://www.eleand.amiga.org/helple.htm>
Meeting times: Anytime (24 hrs)
Address: 27 St. Annas Green Lucan Co
Dublin, Eire

Central Arkansas Amiga Users Group
Location: Little Rock Arkansas
Contact: Tim Groves
Telephone: 501-551 7418
WWW: <http://www.pccar.net/~nub>
Meeting times/Places: Monthly TBA
Address: 14 Hickory Lane Maubere AR
72113 USA

Stoneybridge BBS
Location: Dorset UK
Contact: Gzz
Telephone: 01202 879188 (10.30pm-6am GMT)
Address: 50 Junction Rd. Hamworthy
Poole Dorset (Isle) BH8 1UK

Amiga User Group of Western Australia
Location: Perth Western Australia
Contact: Antlia Rutland
Telephone: 08 93841717
Meeting times: 2nd Tues of month at 7pm
Places: Curtin University
Address: 31 Chiltern St. Marley
Western Australia 6062

Amiga Computer Group
Location: Umeå Sweden
Contact: Martin Salvin
Telephone: +46-090324818 (24 hrs)
WWW: <http://www.amiga.se>
Meeting times: Tuesdays 19.00
Places: Kalle Statum Umeå
Address: Skolplan 14 SE-903 22 UMEÅ
Sweden

Huddersfield Amiga Users
Location: Huddersfield W Yorks
Contact: Geoff Miles
Telephone: 01484 543534
WWW: <http://www.geoffmiles.com.uk>
Meeting times: 7.30pm onwards
Places: Commodore Int. Market
St Paddock Huddersfield
Address: 8 Cullerwell Avenue
Dewsbury Huddersfield W Yorks

Highland Amiga User Group
Location: Highlands Scotland
Contact: Tommy MacDonald
Telephone: 01667 404757 Anytime
WWW: <http://www.hug.ac.uk>
Meeting times/Places: TBA
Address: 7 County Cottages Pipershill
Nairn Scotland N12 5SE

Team Amiga
Location: Worldwide
Contact: Gary Peake
Telephone: 1 281 362 2194
<http://www.wars.net/~gpeake/mix.html>

Meeting times: Daily
Places: At Nets and IRC
Address: 19723 Telier Blvd
Spring Texas USA 77388
Knox Computer Club
Location: Gainesburg IL USA
Contact: Mitch Dardle
WWW: www.gainesburg.net/~kuc
Meeting times:
First Tuesday of Month 7pm
Places: 695 N Kellogg Gainesburg IL
(in the auditorium)
Address: Knox Computer Club
1003 East Fifth Ave
Merrimouth IL 61452
USA

AmigaTCS
Location: Columbia Missouri
Contact: Terry Booher
Telephone: 6731 817 2948
Meeting times: 7pm 2nd tues of month
Places: TBA
Address: 116 West Phyllis Avenue
Columbia MO 65202
USA

South West Amiga Group - Sydney (SWAGS)
Location: Campbelltown Sydney Australia
Contact: Mark Vine
Telephone: 0226311601 After 7pm
WWW: None yet
Meeting times: 7pm-10pm 2nd & 4th Wed of every month
Places: Amiga Community Centre
Riverside Dr Ayrds
Address: 11 Kennedy Grove
Ayrds N.S.W.
Australia 2160

Computer club 32187
Location: Leyland the Netherlands
Contact: Jan Yong Dijkhuis
Telephone: +310320 241741 int after
23.00 CET
<http://www.rickstam/amiga/amiga.html>

Meeting times: Every monday 19.30 till 23.00
Places: Baarthele van Koninging (same as the postal address)
Address: Computer Club Akiel
c/o Baarthele van Koninging
Fjord 158
6224 DJ
Leyland, The Netherlands

Medway & Maidstone Amiga Collective
Location: Medway & Maidstone
Contact: David Prudence
Telephone: 081 308426
Meeting times/Places: TBA (phone for details)
Address: 34 Norman Rd Snodland Kent
ME8 5JD
SOGA - St Otter Gupo Amiga
Location: Miraflores Toluca/Valle Navarra (Spain)
Contact: Santiago Guadalupe ConEs

Telephone: 942 888 248
WWW: <http://www.research.research.es/~gugu>
Meeting times/Places: TBA
Bodmin Amiga Users Club (bauc)
Location: East Cornwall
Contact: Nuk
Meeting times/Places: Bodmin or Plymouth (TBA)
Address: Gault Cottage
Julian Hill
Pelynt, Looe
Cornwall
PL15 3JZ
The FIE BBS
Location: Dunstable Beds
Contact: Carl Moore
Telephone: 015251 626178
WWW: <http://www.bogtoe.demon.co.uk/fie/>
Meeting times: 10.30pm 7am (Call between the specified hours only and make sure you call with yr modem!)

Address: n/a
The Other Realm
Location: England
Contact: Peter Luckhurst
WWW: <http://www.podcasts.com/fie/wood7440>
Meeting times/Places: TBA
Address: Peter Luckhurst
15 South Way
Shirley
Croydon
Surrey
CR9 6RP

2260 Designs
Location: Lymington
Contact: Chris Khoroson
Telephone: n/a
<http://www.using.zetnet.co.uk/khoroson>
Meeting times: Sat/Sun 8pm
Places: inc pureamiga.co.uk #2260
Address: n/a

Club De Usuarios Amiga Zaragoza
Location: Zaragoza Spain
Contact: Carlos Remo
Email: carlos@carlos.es or
bb300295@club.usa.es
WWW: <http://www.club.usa.es>
Meeting times: 5-8 pm Thursdays,
10.30am-2.30pm Sundays
Places: Alifan Roja 14, 50010 Zaragoza
Address: Ardo 246 50001 Zaragoza,
Spain

Backwoods BBS
Location: Inverness North Scotland
Contact: Lewis MacKenzie
Telephone: +44 (0)1463 871676 24hrs
WWW: <http://www2.prestel.co.uk/bwb>
www2

SEAL (South Essex Amiga Link)
Location: South Essex
Contact: Mick Sullivan (seal)
Telephone: 01286 761429 before 9pm
WWW: <http://www.comic.co.uk/seal/>
Meeting times/Places: various/irc
Address: n/a

Send this form to: User Groups; CU Amiga; 37-39 Milharbour, Isle of Dogs, London, E14 9TZ.

Alternatively, fax it to: 0171 972 6755, or use the online version of the form which can be accessed from our website at: www.cu.amiga.co.uk This service is completely free of charge.

General Location: _____ **Group name:** _____

Tel: _____ **Email:** _____

Postal Address: _____ **Web site:** _____

Contact name: _____

Preferred contact method (please tick)

E-mail ☐ **Phone** ☐ **Post** ☐

Meeting Times/Places: _____

AMIGA
MAGAZINE

Digital art

Digital photography is definitely a "happening" technology. It is also a to a certain degree a technology in search of a market. It's great for producing small images easily uploaded to the internet quickly and cheaply, as witnessed by all those who took in the heady World of Amiga show experience via the internet aided by the CU Amiga webcam. For producing finished presentation images, even the best cameras leave a little to be desired. Sure the £1200 Olympus C1400L we looked at in the May issue produces pretty crisp output, but even in those rarefied heights the end product still looks more like a holiday snapshot than an Ansel Adams photographic masterpiece. With the cheaper cameras the story is even fouger - poor lens quality, blurry images. Beyond hope? Not if you cheat.

Cheat!

Cheating is a great tradition in photography. The physical nature of traditional photographic processes is just asking to be messed about with, from the simple things like pinning for a higher contrast through more complex chemical manipulations such as toning or cross processing colour films (putting slide film in the negative film chemicals), a current mainstay of the fashion photography industry. With your picture in the digital domain, of course, the output from a digital camera is just begging to be messed with. You can alter pretty much every aspect of an image, warp it, transform it, change the colours totally or remove them altogether. Fine, if you just want to stick a picture of your dog on your homepage then fine, do it - just don't expect me to respect you in the morning.

While the world of holiday snapshots and magazine covers has gone largely colour, black and white is still very widely used in photography. Many photographers prefer black and white because they feel it gives a more

realistic image than colour. This sounds pretty screwy when you think about it, but there is a solid logic behind this.

With a black and white image, the information which the eye receives is monochrome. The eye is disoriented by colour, as we use it to help identify objects. One of the main purposes behind photography is to show something in a way we do not normally see it. If you see a photograph of the sky in colour, your eye sees a lot of blue and your brain uses that as a clue to identify what you are seeing. This aspect of our neuro-optical development is a useful evolutionary trait, as it allowed primitive man to take to his heels when he saw a yellow and white striped sabre tooth tiger rather than having to study it carefully to determine what it was.

Con your brain

Showing something in tone without colour makes it harder for our brain to make a quick identification, and therefore lets us study the image undisturbed and hopefully learn something more about it. One of the most famous photographic movements was the f64 group, who concentrated on presenting mundane objects in a way that would encourage the viewer to see them as abstract objects as worthy of attention as any work of art, they found black and white work invaluable.

The first two projects show how you can take a photograph and manipulate it by converting it to black and white, gaining maximum impact through tone. The third project is a bit more drastic. An interesting final image does not have to start with an interesting original image at all - the heavy duty manipulation available through image processing software makes it possible to transform an image utterly. For similar reasons to those outlined above for black and white, some of the most effective colour photographs are those which utilise false colours. ■

Andrew Korn

This month Andrew Korn tries to make something a little out of the ordinary from a digital camera.

PART
2

Greyscale conversion

This last example shows how to do greyscale conversion properly: the key is not to trust what a grey scale converter gives you, it's bound to be less interesting than it could be.

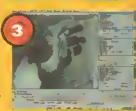


Picture 1. The original image, a 320 by 240 pixel digital photograph of a hand. Pretty dull at the moment, harsh colours and grainy.

Picture 2. Image Studio will convert the image to greyscale for you, but a much better final image can be achieved. The greyscale may be an accurate tonal representation of the original, but it doesn't look as good as it could.



Picture 3. A blur filter can remove some of the graininess inherent in digital and low light photography, while using Image Studio's Focus convolve on the blurred image brings the crispness back. Be careful which convolves you use. Blur and Sharpen convolves are usually minor image processes and they will not produce the best results.



Picture 4. Using the balance window, the contrast, brightness and gamma of the image can be modified. Bringing the contrast up ensures the image has plenty at each end of the tonal spectrum, although using Image Studio's Dynamic range functions can ensure that your whites are white enough. Playing with the brightness and gamma controls ensure that the tonal range is not compromised too much by the contrast controls. Gamma is the key to shifting the broadest area of tonal range into highlights or shadow whichever is appropriate. In this case the shadows and darker mid tones have been emphasised.



Picture 5. The final result!

Let's get weird

There is of course a lot you can do by getting away from the original colours of an image too. The following project was an attempt to use false colours to turn the face of my brother's cat into something altogether less worldly.

Picture 10: Calling on the power of ImageFX3.0, I started off with the simplest of colour abstractions: negative. The Solarise effect causes a pseudo-negative based on rolling rather than flipping the colour range. By repeatedly using the negative effect followed by a solarise, the colours move further and further from the original

set, while retaining the shapes and structures.

Picture 11: The result. Without the colours as a guide, the close cropping makes it difficult to recognise the feline origins of the image.

Picture 12: Next, a little textural abstraction! The flowing colour lent themselves to lines of texture, too. ImageFX's Solarise effect was used at a relatively low level, enough to roughen up the

image and impart the impression of flowing, cellular hairs to an impression of flowing clouds.



Picture 13: The final result, and not very cat-like any more!

The Software

Image Studio:

You can find a shareware version of this beginner-bucket image processing package on our CD this month in the magazine/DigitalART drawer. The full version with manual can be bought from LH Publishing. Telephone: +44 (0)1908 370230.

ImageFX3.0:

This is the program I would recommend to anyone taking image processing really seriously. Call Wizard developments: +44 (0)181 303 1800. Price is £179.99. There are also some very nice upgrade offers if you have an older version.

In the next example, we modify the colour of an image before turning it into greyscale. While this sounds crazy at first, there is a good reason for it.

Picture 6: The original picture. Cloudscapes are a common subject but rarely look so good in the final image. Photographs rarely capture the luminance of a bright sky but by tuning to black and white you can often convey the luminance through tonal character. Alfred Stieglitz used black and white film for photographing clouds for his series "equivalents", stating that the black and white representations of the chaotic shapes of clouds was a way of achieving an artistic abstraction which allowed a very simple emotional connection with the image.

Picture 7: A simple greyscale conversion slightly tweaked for an improved tonal range.

Picture 8: At an elementary level, a cloudscape contains blue skies and white clouds. If you darken all the blue, you can increase the contrast without removing any of the detail or tonal range in the white/grey highlights. This image is the result of tweaking the colours with an eye for the tonal range rather than the colours. It looks a little like a sky from some Alien world, right now.

Picture 9: The re-coloured image is converted to greyscale, giving an end result with rather more subtlety and character than the original greyscale image. The scene is moodier without overwhelming the detail, and the contrast is higher, without badly affecting the dynamic range.



Amiga C Programming

This month your friendly neighbourhood programmer, Jason Hulance, has a little dabble with GadTools ListViews, and tinkers around with SetFunction().



This month we're going to draw a line under our HelloWorld paint program and call it a day. It's helped us cover an awful lot of topics, from basic windows right through to fractals and creating slave tasks. But it's no longer possible to squeeze interesting things into the framework of a paint program. Hopefully many of you have been inspired to start coding your own works of art, and hopefully they're not all paint programs, too! So what's up this month, then? A bit of naughty tinkering with the system, that's what. But first we must create a simple GUI for the tinkering program to use.

GadTools revisited

By now the use of GadTools should be fairly familiar. In fact, we've borrowed most of the first program "setf0.c", from the first GadTools example constructed many months ago. However this time we're creating a ListView gadget which is used to display a (vertically) scrolling list of items. The key parts of the code should need no introduction. 1) Open required libraries. 2) Get visual

information for GadTools. 3) Start a GadTools gadget list. 4) Create a gadget and add it to the list. 5) Repeat 4) as necessary. 6) Open window and refresh gadgets. 7) Process IDCMP events, until the close gadget is clicked. 8) Cleanup: close window, free gadgets, close libraries. The interesting new bit is the creation of a ListView gadget (see the extract in Example 1). For the moment we've (safely) omitted the most important tag (GTVL_Labels), so the ListView will be empty, but everything else is in place. We've also slipped in a new way of specifying the window width and height when opening it: WA_InnerWidth and WA_InnerHeight. These are like the normal ways of doing it, except you give the internal width and height of the window (i.e., the size of the bit inside the borders). So, the actual window will be a bit bigger than the dimensions you give since it will have a title bar and other decorations.

Exec lists

The ListView gadget displays the data held in an Exec list. This is something we've not really met

before, which is a little strange because it's one of the most common structures in the Amiga Operating System. Almost everything significant is held in some Exec list or other. From the list of open windows to the list of messages waiting at a message port. It's also one of the aspects of the Amiga OS that is Object Oriented, but more on that some other day. Back to the ListView: it displays the list. Name field of the Node elements in the list. So we need to create a new Node for each thing that should be displayed, and add each one to a list. Example 2 shows the changes needed to make the ListView use our own list. The crucial point is the initialisation of the list before it's used. This is done by the function NewList() which comes from amiga.lib. A "struct List" must be setup in this way before it can be used as an Exec list. A node (i.e., a "struct Node") can be added to this list using AddHead() to add it to the front of the list or AddTail() to add it to the end. Both these operations are very fast, since the Exec list is doubly-linked (it's just as easy to access the last element of the list as it is to access the first). So, what are we going to add to our list? This is where the naughty tinkering code comes in. We're going to snoop on programs running the OpenLibrary() function a bit like the wonderful SnoopDOS program.

Patching libraries

The Amiga OS provides a function for replacing individual library functions: SetFunction(). This is extremely dangerous to use, and even the most careful "hacking" can cause serious crashes, so this is the point where you're advised to proceed at your own risk. In

any case, make sure you've saved any important work before you start playing with the next few examples. The second example "setf1.c", uses SetFunction() directly. It's naughty in several ways. 1) It's not generally poss-

Example 2

```
mylist, NewList();
// Now create it and add
it to our list */
if (gadget =
CreateGadget(LISTVIEW_KIND,
listgad, &newgad,
GTVL_Labels, &mylist,
TAG_DONE))
createWindow(glist); else
printf("Error: could not
create gadget(s)\n");
```

ble to use ordinary C functions to replace library functions; and 2) it's not 100% safe to use SetFunction() at all. The examples on the disks have been constructed using StormC and they are pretty stable, given suitable conditions. This means that the compiler should not generate code that corrupts significant registers. Using the large (far) data and code model in StormC seems to be OK. SAS/C is probably fairly safe, too. To do this kind of thing properly we really ought to use Assembly code for the replacement library function. Most C compilers support linking in object files from standard Assemblers, but this is beyond the scope of these tutorials. So, we'll stick with using just C for these small examples and keep our fingers crossed. Anyway, back to the code: the call to SetFunction() needs the library base of the library to be patched together with the offset of the victim function and the address of

Example 1

```
Setup our first gadget */
newgad.ng_TextAttr =
&topazFont, newgad.ng_VisualInfo =
vinfo; newgad.ng_LeftEdge = MYGAD_LEFT + offset;
newgad.ng_TopEdge = MYGAD_TOP +
offset; newgad.ng_Width =
MYGAD_WIDTH; newgad.ng_Height = MYGAD_HEIGHT;
newgad.ng_GadgetText = MYGAD_TEXT; newgad.ng_GadgetID =
MYGAD_ID; newgad.ng_Flags = 0; // Now create it
and add it to our list */
if (gadget =
CreateGadget(LISTVIEW_KIND, gad, &newgad, TAG_DONE))
createWindow(glist); else
printf("Error: could not
create gadget(s)\n");
```

the replacement. The `OpenLibrary()` function is in the `Exec` library, so we've supplied `SysBase` (which is defined in `amiga.lib`, so it's declared as "extern" in our source code). The offset of `OpenLibrary()` is a much more difficult thing to find. You need to look at the `#pragmas` entries in the files in the `Include` pragmas directory. For the `Exec` library the file in question is `Include/pragmas/exec/pragmas.h`. This lists the functions in the `Exec` library in order of their offset. The number that increases by six (generally) is the offset, and for `OpenLibrary()` this is "226", which is a hexadecimal number (although some compilers might use pragmas that specify offsets as decimal numbers). In fact, the value we need to supply to `SetFunction()` is negative, i.e. `-0x226` in C speak. To be really complete and precise it is actually possible to get most library offsets from `amiga.lib`. They're the exported constants with an "LVO" prefix. Unfortunately not all the offsets can be found there, and in particular the one for `OpenLibrary()` is not present.

Example 3

```
#include <semaphr.h>
and lock it
**/InitSemaphore(&ready);
ObtainSemaphore(&ready);
old = SetFunction(SysBase,
LVO_OPENLIBRARY,
(JAPTR)&new); /* Now do
the real work
*/
SetupWindow(); SetFunction(
onSysBase, LVO_OPENLI-
BRARY, (JAPTR)&old);
```

Replacement

`OpenLibrary()` (if `SetFunction()` is also used to reinstate the original library function. To this end the result of a call to `SetFunction()` retains the address of the replaced function, which can be used when you wish to reinstate it or if you want your new function to incorporate the old function's effect. Example 3 shows the wrapper around `SetupWindow()` in `main()`. The presence of the semaphore is a protection mechanism, much like that used for the multitasking fractal code. Our replacement code for `OpenLibrary()` will try to update the `Listview` gadget, which is only valid once



◀ The result of the first program's Listview

the gadget exists and before it is removed. As other processes and tasks will be running our replacement code we need a way of preventing them doing so at "bad" times. A semaphore is ideal for this job. Example 4 is the real meat. We're using some compiler-specific deceives again like `"__saveds"` since this is pretty low-level stuff. The register arguments are the ones that are documented for the `OpenLibrary()` when it's called from Assembly. The first thing the code does is call the old version of `OpenLibrary()` (or whatever had been patched in as this function). If it's safe to update the list, we will then successfully hold the semaphore. It's worth noting at this point that any task or process could be running this code so we shouldn't use DOS functions (like `printf()`) or any other I/O or allow the code to fall into a `Wait()` (so we couldn't use `ObtainSemaphore()`). Our real extra functionality is the

`addNode()` call (see Example 5). This function allocates a new `Node` and allocates and formats the `In_Name` element. The memory allocation is done with `AllocVec()`, which must be paired with `FreeVec()` to deallocate the memory. The advantage of these functions over `AllocMem()`/`FreeMem()` is that the size of the memory allocation does not need to be specified with `FreeVec()` like it does with `FreeMem()`. The interesting call to `sprintf()` is like the `printf()` calls we've used before but the result is stored in the string supplied as the first argument. The various parts mean: `"$%8lx"` The address of the resulting library base is formatted as an eight-digit hexadecimal number (with a leading `"0x"`). `"%20s"` The name of the calling task (extracted from the `Node` in the result of `FindTask()`) is formatted to at least 20 characters and left-justified. `"%s"` The supplied library name is used in full. Hopefully,

this ought to explain the careful calculation for the amount of memory allocated for the `In_Name` field.

Exec list

An `Exec` list is basically a doubly-linked list. In a normal (simply) linked list each element (or `Node`) in the list has a pointer to the next element, with a `NULL` meaning the end of the list has been reached. In a doubly-linked list, each `Node` also has a pointer to the previous element, and `NULL` is used to mean that the start of the list has been reached.

Updating the Listview

The remaining bit of interest is the update to the list and the `Listview` gadget. Before the list used by the gadget can be altered it must be removed from the gadget. To do this we could attach a second, empty list, but that might cause the gadget to flicker when we eventually replace it with the updated list. Luckily, there's a nicer way to do this. `GetTools` allows the list to be specified as the special value `0`, which means "detach the list but don't update the display". So the first

Example 4

```
typedef struct Library* (*FUNC)(register __a1
STRPTR name, register __d0 ULONG vers; FUNC old);
struct Library* __saveds new(register __a1 STRPTR name,
register __d0 ULONG vers) { struct Library* result =
old(name, vers); /* Make sure the list/gadget is
ready to be updated */ if (AttemptSemaphore(&ready))
{ addNode(name, result);
ReleaseSemaphore(&ready); } return result; }
```


Like for like, we will price match any items in stock



Emulation

PART
2

Serious PC and Mac emulation throws up a number of sticky problems once you've got the basics sorted. A decent CPU, compatible drives and RAM for example...

I can hear your first reaction to this article now: "Oh, no! Not another 'upgrade' article!" Well, yes and no, but mostly no. See, if you're going to get serious about serious Mac or PC emulation, there's a certain set of tools that will make your life much easier. Just getting the emulator and operating system is only part of the battle; after that, you have to make it useful, and with a little careful investment and patience you can do just that.

screen data in memory for extra speed, that can eat up quite a chunk as well.

Back in the days when memory actually represented a significant cash outlay, we would say "16MB in your Amiga is a functional minimum for Mac emulation." But memory prices have been cut in half more than once since then, and just getting off the ground with MacOS 8 requires 32MB of memory. It can take it with virtual memory, and despite the fact that Fusion will

functional level – add at least another 8 if you want to clear 32MB on the Mac partition so you can comfortably run MacOS 8.

On the PC, things are a little trickier. Unlike the Mac, you don't usually get the luxury of just mapping all the memory you'd like (at a 1:1 ratio) over to the emulator. For PC-Tek, that is possible in theory, but it makes for very slow emulation. For PCx, you hit a 16MB wall; that, in the present versions of PCx, cannot be worked around. All of those 16MB need to come from a single block of memory – on most accelerator boards, that means your SIMMs should be in matched pairs (if you have room for more than one).

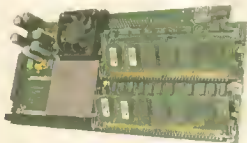
The way PC-Tek works makes it very effective to have as much memory as you can squeeze into the machine. The emulator uses "dynamic" techniques to convert blocks of PC-compatible x86 code into Amiga 680x0 code on the fly. Doing that saves you time in the long run, but the cost is available memory. The more memory you can give PC-Tek to use for this code conversion, generally the faster your emulation will end up being. So, in general, the more memory you can throw at the problem, the better.

And that doesn't even begin to enter into how much memory you'll want to have handy to do serious emulation: if you stick with DOS-based appli-

CDRs

Something to consider as the technology gets cheaper and cheaper are CD recordables (CDRs). If the amount of data is considerable, burning a CD on a 2X or 4X drive is not necessarily a ridiculous prospect. CDR media continues to drop in price, and at worst, you have a permanent backup of whatever you needed to transfer from one machine to another. CD rewrites (CDRW) don't have the problem of permanence, but they are substantially more expensive.

While not everyone can justify burning a CD whenever a single floppy won't do, the advantage to using a CDR to move data between platforms is that the PC, Mac, and Amiga will all read standard CD filesystems, without any encouragement. Keep in mind, however, that under old DOS, some restrictions may show up if you don't have very good CD driver software – if you're unsure, it's best to use the 8+3 filename limits when burning those CDs.



▲ Emulating modern Macs and PCs requires a lot of RAM and brute force from the CPU. A 68060 is a good start.

Memory munchers

We all know the AmigaOS is wonderfully frugal when it comes to memory usage. This was terrific news when memory was many many times more expensive than it is today. Now, though, even Amiga users benefit from having memory to spare on hand, and it's even more handy if you're planning to emulate PCs or Macs.

For Mac emulators like Sheepshifter or Fusion, you typically burn at least 4-5MB of RAM, minimum, just launching the things. If you are buffering your

handle VM under the MacOS, using VM full time is a terrible idea, and it's best to stop before you start.

If you stay away from MacOS 8, and don't run millions of extensions on your Mac partition, you can get away easier, but big applications like Microsoft Word and Adobe Photoshop still require several megs of memory just to launch without any projects running. Then you load in a nice big TIFF, and wham, you're out of memory again. For this reason, start considering 32MB of memory in your Amiga to be a good



▲ Of course most PC and Mac software comes on CD now, but you've probably got a CD-ROM drive so that shouldn't be a problem.

cations, having 8 to 16 megs available for the actual emulation should be very sufficient. If you plan to use Windows 3.1, 8MB is a real minimum - it's possible to run Win 3.1 in 4MB, but tends to be slow and tough to open many applications. And if you want to take the serious plunge and try running Windows 95 under PC-Task 4, 16MB (and a lot of patience) is required.

Floppy appendages

From installing the emulator operating system for the first time to getting crucial files over to the right partition to exploring all the bazaar bin PC and Mac apps you suddenly get access to, a floppy drive is indispensable. Of course, we all have them - but by and large, Amiga users still tend to have the double-density jobs. Commodore and Escom shipped in most Amigas. These just won't cut it.

PCs once upon a time were shipped with double-density floppy drives, so there are some applications, including slightly older versions of DOS, that you might find and use on a regular Amiga floppy drive. But it didn't take very long for high density floppies to proliferate on the PC and most of what you'll come across requires a high-density drive.

For Mac emulation, the situation is even more clear cut. A standard double-density Amiga floppy can't read any double-density Mac disks, period. The format of the Mac double-density disk is about as custom as one can get - Apple actually changed the speed of rotation depending on the position of the head on the disk. Mercifully, Apple came to some sort of sense and made their high-density format far more conventional. With only a little software help (like an emulator) an Amiga high-density floppy drive can be made to read Mac high density floppies like a pro. This is no problem if your

Amiga came shipped with a Canon high-density floppy in the first place. But in general the only people this lucky were certain Amiga 3000 owners and all Amiga 4000 (desktop) owners. Along with the tiny group of original Commodore 4000T users. Bearing that it's time to look elsewhere. Some developers have found ways to modify other types of PC floppy to function as an Amiga high density floppy drive (they're not exactly the same - the Amiga, due to limitations of the floppy controller, needs the drive to slow down in high-density mode), and those function pretty well as drop-in replacements for your original floppy drive. They can be a little pricey, however. The advantage is that they'll work exactly like your old Amiga floppy did, just with added support for Amiga PC, and Mac high-density floppies.

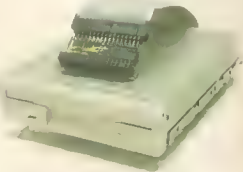
The other route to take is a Catweasel. This little device will allow you to plunk almost any PC high-density drive you can find into your Amiga and get access to all sorts of floppies, including high-density PC, Mac, and Amiga. In some cases, you can even make a modification to an Escom A1200 floppy drive and use it, otherwise you'll have to seek out a cheap PC spare parts place and get one. Depending on how much you have to pay for the drive, this route can actually be cheaper than a dedicated Amiga high-density drive. The inconvenience is that the

Catweasel doesn't function exactly like conventional Amiga drives do - there's a different partition name for every single different type of disk, and its autobooting function leaves something to be desired.

Those silvery things

If you want to use modern PC or Mac software, you'll most likely be wanting more than just the high-density

some interesting removable media devices. Zip drives, Jaz drives etc. work as well on a Mac or PC as on the Amiga. So, you can use say, a Zip disk to move a load of JPEGs off of one Mac onto your Shapeshifter partition for work in Photoshop. If you later want to take those over to a real PC or maybe just a PC emulator partition and don't want to muck about with the software tools to move the files, you can put them



▲ A high-density floppy disk drive will definitely make things a lot easier.

floppy. It hasn't just been Amiga companies who have discovered the tremendous economies of scale a CD-ROM provides, and you'll come across them by the bushel on other platforms. Having a decent, reliable CD-ROM is a must. PC emulator users should read and re-read the documentation with your emulator before you sit down to try to make it work - you have to delve into the techie domain of CONFIG.SYS and

AUTOEXEC.BAT and while you can't 'break' anything if you make a mistake, you can get frustrated in a big hurry if it's not working right. Mac emulators can access your CD more directly, either through the SCSI bus (if it's SCSI) that is) or through the relevant device driver, and it's typically much easier to get up and running.

If you need to move lots of data between your emulation system and either another Amiga or other real PCs or Macs, you have

back on that Zip disk. Despite the hassles, if you stick with the old MS-DOS 8+3 filename limit (8 letters in the filename, three in the extension), you can be sure it will at least be readable on all three platforms. Sometimes least common denominators are handy.

When you're emulating, you have two (or more) computers fighting for the resources of one. You just have to be a good shepherd and make sure that everyone has what they need to keep happy and keep you productive. Besides, when you're emulating, your investments get spread around between more than one type of computer. That should be enough rationalization for most people, right? ■

Jason Compton

Resources

There's really only one place you need to look for more Macintosh emulation information, www.emulation.net.

It's a one-stop shopping venue for all of the emulators mentioned in this article, and much more.



▲ A nice array of Zorro cards always helps. Aside from a CPU card and some extra fast RAM, the extra useful add-on is a graphics card, which will speed up your display and allow for much longer screen sizes.



Surf's Up!

Newsgroups and websites have been buzzing since the WOA announcement. Suddenly it seems the Net has acknowledged the existence of the Amiga...

NetGod speaks

If nothing else, the recent press releases and announcements from Amiga Inc, phase5, Hargreave Partners et al have provided both the trolls and fanatics with plenty of material which at least saves the first group the effort of making things up.

It's been a long time since usenet was as good a spectator sport as it is now, although it does make finding intelligent life in some newsgroups even harder than it was before.

I'm all for attractive looking web pages, provided it doesn't get in the way of the content, but some sites are plain ludicrous. I was looking for some hardware, at a company I'd been recommended. When I got to their home page it was entirely graphic buttons, with no text whatsoever. So I waited for the images to arrive from what was obviously a slow site, only to see that each was an image of some text!

Following the links resulted in more pages in the same style, with different images and more waiting. It was all very pretty, but how many people went pretty instead of fast when they are sourcing electronic components? I doubt the webmaster had had the site from anywhere but the local network.

I did get what I wanted, by going to another company with a more practical site.



Best Viewed With
a TL Link

Ten days before the World of Amiga, Amiga Inc stated that they would be making a major announcement at the show. From that moment the newsgroups and mailing lists went berserk. The increase in traffic was incredible. I turned off my Amiga the night before WOA to take it to the show. By the time I got there and got back online on Friday afternoon, there were 475 new postings to comp.sys.amiga.misc. The Team AMIGA mailing list showed a similar increase in traffic. The discussions spilled over into other newsgroups and mailing lists too. Once the announcement happened, it got even busier!

Much of the discussion from the Amiga newsgroups appears on the CU Amiga CD each month and is available from DejaNews too, but mailing lists have generally been harder to read after the event. Now the Team AMIGA mailing list is available as archives from the list server at <http://www.thule.no/cgi-bin/wgate>. The THOR mailing list is also available from here.



Opera

Development on some of the three main Amiga browsers appears to have slowed recently, with only one of them releasing a major upgrade so far this year. Now there is a new player entering the competition. You may remember the mention of



Opera in the April Surf's Up. Opera is a browser currently available for the PC that is being ported to other platforms by programmers specialising in each of those platforms. At that time they were trying to gauge the demand for an Amiga version. They received a tremendous response and have now decided to go ahead with an Amiga version, to be developed by a UK company Ramjam Consultants Ltd.

"We are delighted to be involved in porting Opera to the Amiga. Opera has an Amiga 'feel' to it even under Windows 95, so I'm confident it will make a high-quality Amiga application, and will offer a degree of commonality with Windows 95 that few applications achieve", says Tim Coringham of Ramjam.

Opera has already gained quite a following among PC users because of its lightweight and efficient design, in comparison to its massive and often ponderous competitors. By having access to the development work of the PC team, Ramjam should be able to add Amiga support for new features more quickly than the programmers of the other browsers, who have to do so much of the work themselves.

The planned release date of the first Amiga version is December 98.

Bootnat survey

Bootnat, a general computer news site, recently carried out a survey of reactions to the announcement of the new Amiga. Considering that this is not an Amiga site, so you

would expect a somewhat less enthusiastic response than you would from an Amiga-specific site, the results are both surprising and encouraging. The question was "How do you feel about Gateway resuscitating the Amiga?" and readers had three choices. The current voting stands at:

There is a God! I want one!	85%
Um, Why?	23%
Ne	8%

Does this really mean that two-thirds of PC owners want one of the new Amigas? ■

Nail Bothwick



Contacts:

Team Amiga Mailing list
<http://www.thule.no/cgi-bin/>

hwgate Home page
<http://web.wt.net/~hwgate/>

Opera
Ramjam Consultants Ltd
<http://www.ramjam.u-net.com>

Bootnat
<http://www.bootnat.com/option.html>

Deja News
<http://www.dejanews.com>

Surf of the Month

Once again, fluffy Neil Bothwick - like a duck teking to water - rummages for tit-bits in the sea of information.

When you want to buy or sell something you can't beat classified advertising, and the web adds the power of search engines to traditional classified ads. **Exchange & Mart** and **Loot** are two, well established, classified publications that are now accessible via the web and it really is a lot easier to type a request into a search engine than it is to pore over pages of small print classifieds. Naturally, if it's Amiga kit you are looking to buy or sell, you have to look on **AmiBench**.



Bargain Holidays



A2B Travel

Sun, sea, sand and...

It's the time of year when thoughts turn to sunning yourself on a beach. I've always thought the web was well suited to providing information and promotions for holidays, much better than watching page after page of teletext, only to forget to press Hold when you finally see something interesting, but there are



Brain Soup

very few travel companies taking advantage of it yet. **A2B Travel** provides a wide ranging travel service, including useful information like exchange rates.

Their site links to **Bergain Holidays**, who provide the same sort of service in cut price holidays as the teletext advertisers, but in a more accessible way.

I'll name that tune in one

The collection of 6000+ CDID files on this month's CDID is nothing in comparison with what is available from the CD Database. They stopped making the whole database available for download after it got bigger than 70MB! The database can be used in two ways.

You can search for artist, track or CD names, as you would expect from a database, but this one has an extra feature. If you put a CD in the drive whilst online and running a suitable CD player, it will contact the database to retrieve information on that CD. There are no Amiga players listed on the site, but the relevant information about the database is freely available, so there's no reason why this couldn't be added to some of the many Amiga CD audio players.

While searching for information on CDIDs, I came across a site that will appeal to music trivia 'experts'. **CD+ID** shows a small portion of a CD cover and asks you to name the artist and title. There are archives on the previous competitions too.



CD+ID

Way to go!

The **Darwin Awards** are given usually posthumously to the individual(s) who remove themselves from the gene pool in the most spectacular fashion. There are several sites relating to these awards, but this is the official one. Since most of the stories relate to someone's death, some people may find these sites somewhat tasteless, but others will find them very funny. The story of the guy who attached a solid rocket motor to his car, and ended up embedded in a cliff face 125 feet above the road, is now a classic.

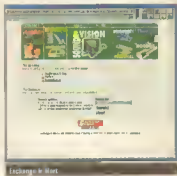
The real thing

The link between computer enthusiasts and science fiction fans has

always been strong, just look at the number of *Star Trek*, *Star Wars* and *Babylon 5* web sites. You can't beat the real thing though, **NASA** have a comprehensive web site providing up to date information on current and future missions, with a large selection of pictures.

Web sites on how to make your own web site have always been popular. **The Brain Soup** site is basically a collection of background features that could be used for web page or Workbench backdrops, presented in a clear and easy to use way. **Jeffrey Zeldman's** site provides a wider range of resources. As well as collections of icons and backgrounds, this site provides tutorial and help information on web site authoring and, unlike the previous site, it is updated very frequently.

Neil Bothwick



Exchange & Mart

URLs

Loot	http://www.loot.co.uk
Exchange & Mart	http://www.exchangeandmart.co.uk
AmiBench	http://thunderstorms.org/AmiBench
Brain Soup	http://www.skardy.damen.co.uk/bsoup
Jeffrey Zeldman	http://www.zeldman.com
A2B Travel	http://www.a2btravel.com
Bergain Holidays	http://bergainholidays.com
CDDB	http://www.cddb.com
CD+ID	http://www.blaf.com/users/bareloft/cdid.html
The Darwin Awards	http://www.officialdarwinawards.com
NASA	http://www.nasa.gov
CU Amiga Online	http://www.cu-amiga.co.uk

Wired World

FTP programs don't have to be all file lists and buttons. FTPMount is so easy to use you could forget it's there.

FTP or File Transfer Protocol is the standard way we exchange files with other computers on the Internet. Generally we use either a dedicated FTP program, like AmFTP or AmFTP, or a web browser. But is this really the best way to do things? All an FTP program does is download a copy of a file from a remote machine and save it to your hard drive. It doesn't let you do anything with the file you've downloaded.

So using files from the Internet is a two stage process, you need one program to download a file and another to actually use it. Wouldn't life be much simpler if the program that used the file could also download it? Just think how much time and trouble it would save if you could import a file from the pix directories of Aminet straight into ImageFX or upload that masterpiece of a web site you've just created straight onto your ISP's web server.

Aminet on your Workbench?

The good news is that this is possible, and has been for several years using a little-mentioned program called FTPMount. FTPMount does just what it says, it mounts a device called FTP on your system, which you can then use to access just about any FTP site from any program, including Workbench. FTPMount is in the Wired World drawer of this month's cover CD. There is an installer script, but manual installation is simply a matter of copying the FTPMount directory to your hard drive, moving the contents of the DOSDrivers drawer to SYS Storage/DOSDrivers and assigning FTPMountDir to the FTPMount directory.

Once you've installed FTPMount go online, open a shell and type `multiview`



`FTP:uk.aminet.net/amnet/RECENT` and you will see the list of recent uploads to Aminet displayed on your Workbench.

This is a start, but FTPMount is capable of much more than this. Instead of typing in the full address of a site and the path to the directory you need, you can set up an alias to do it all for you. In FTPMount, Hosts you will find a number of drawers represents a site (or host), with configuration information held in the icon's tooltypes. Select one of the drawers from Workbench, make a copy and rename it to 'Aminet'.

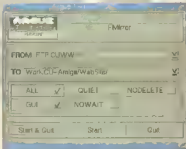
Then select information from the icons menu of Workbench and edit the tooltypes so they look like the screen grab. Now FTPMount will take you straight to the main directory of the UK Aminet mirror. You could set up several icons for your favourite Aminet directories. If you then open the drawer on Workbench and select 'View by Date' and 'Show All' you will be able to see any new uploads to this directory immediately. Since this is a Workbench icon, you can snapshot it so this becomes the default display for that site.

Maintaining a web site

FTPMount is not restricted to sites that accept anonymous logins; you can also configure hosts to access

password protected servers, such as your web space. The USER and PASSWORD tooltypes allow you to log into any site that you have permission to access. There is also a new PASSWORD.CRYPT tooltype that lets you store your password in encrypted form. This is more secure than saving the password as plain text that anyone can read, but it may be wise to keep a copy of the password somewhere safe in case you forget it.

Here's the Mirror GUI. The ALL option is ticked to make it act as all files in subdirectories. The GUI option gives a program report.



pass. Once a web site gets bigger than a few files in a single directory keeping it updated from the master copy on your hard drive can become a major chore. FTPMount makes it much easier, especially if combined with other programs. Simply typing `Copy Work MyWebSite/?`

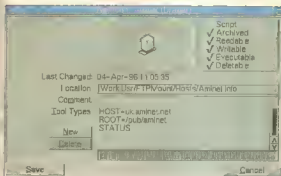
Copy Work MyWebSite/ALL will copy the entire contents of your web site from your hard drive to your ISP's web server, provided you have created a suitable host for FTPMount. Updating it takes a little more work, but not much.

There is a neat little backup program called FBack, accompanied by FMirror, that makes maintenance of even the most complex of web sites a doddle. FBack works by checking the archive bits of all the files in its source path, and copying any files that don't have the archive bit set to the destination path, setting the archive bit of the source file as the

process. Archive bits are a feature of AmigaDOS that allow software to keep track of files that have been modified, you can see them in the output of the `ls` command, or in most directory utilities. Whenever you modify a file, its archive bit is cleared, so your backup program knows it has been changed since the last backup, without needing to know the date of that backup. So FBack will simply copy all files that have been modified since it was last run. By setting up a host in FTPMount for your website, and

Web cameras

There are many other things you can do with FTPMount. If you looked at CU Amiga Online during the World of Amiga, you may have seen our webcam. This was based on a simple script that took a directory of photos taken with a digital camera and uploaded them to the web site at regular intervals, using FTPMount. You could just as easily set up a live webcam using either a video camera with a frame grabber or a digital camera. Set it up to grab a picture at regular intervals and save it as `FTP MyWebSite/webcam.jpg`



▲ Here you can see the basic FTPMount setup for the UK AmigaNet site. You can set up additional hosts for specific directories by choosing the HOST override.

using that as the destination in FBeck, you can quickly and easily keep your site up to date, whether it is a small collection of homepages or a large commercial site.

Clear out the deadwood

When you've been running a web site for a while, you find you accumulate all sorts of files that are no longer used, such as old images you don't want to spend online time travelling though your web site looking for files that are no longer needed, and you don't need to FBeck comes with a companion program called FMirror. This does the opposite of FBeck: it checks the source path for files that do not exist on the destination path and deletes them.

In this case you set the source path to the remote server via FTPMount and the destination to your local copy of your web site. So you first run FBeck to copy across any updated files, and then run FMirror to remove any outdated files. The screen grabs show the GUIs used for each program, but they can also be run from the shell, or a script. All you need is a two line AmigaDOS script like this:

```
FBACK FROM Work/MyWebSite/
TO FTP/MyWebSite/ ALL NOCOM-
MENT FMirror FROM
FTP/MyWebSite/ TO
Work/MyWebSite/ ALL
```

Call it UpdateWWW and either type it in a shell or attach it to a Dock button. You can now update your whole web site with a single command. One word of warning, some web servers also store system configuration files within your web space. If this is the case you will need to keep a copy of those on your hard drive to prevent FMirror deleting them.

Uploading web pages

The procedure for uploading web pages to your homepages space varies according to your ISP. With some you have to request access to your space before you can use it, whereas Winnet and Demon make it available from the day you open your account.

Generally you need three pieces of information to log in to your web space: the upload address, a login name and a password. The login name and password are usually the same as you use when dialing in, the format of the upload address varies according to your ISP. These are the addresses for several UK ISPs.

Winnet: www.yourhostname.uk.net.com (using your own hostname)

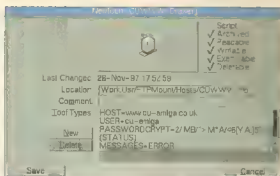
Demon: homepages.demon.co.uk

Enterprise: homepages.enterprise.net

Netcom: www.netcomuk.co.uk

The Opus alternative

Users of Directory Opus have a facility similar to FTPMount built in. OpusFTP lets you display the contents of an FTP site in a list, and perform most of the operations you would on a list containing a local directory. It's not as suitable for using in a shell, which is why I used FTPMount for the WOAcem, but it makes up for this with many other features not present in FTPMount. Any existing user of DOpus Magellan should have a good look at the features available with OpusFTP, some of which are available on very few FTP programs on any platform.



▲ This is FTPMount set up to access a web site. Note the use of the encrypted password to prevent anyone reading the password from the file and ascertaining it.

UK Online: web.ukonline.co.uk
Globalnet: www.users.globalnet.co.uk (copy files to public_html directory)

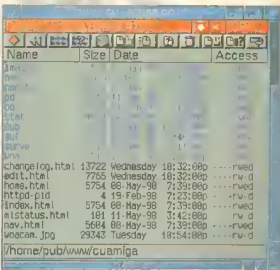
Zetnet: www.users.zetnet.co.uk

Note that even though some of these are www addresses, you still connect to them with an FTP program. Most web servers run on Unix, which has a case-sensitive file system. This means that you need to be careful with the spelling of link and file names. If you have a page called AllAboutMyDog.html and a link of the link will work fine when testing it on your Amiga, but will fail when uploaded to a Unix server, since

these are considered to be two completely different file names. The safest option is to use lower case everywhere to avoid the embarrassment of people complaining about broken links and images that don't display. ■
Neil Bothwick
[ncud@wrl.enl.co.uk]

On the CD

FTPMount - including the recent update
FBeck - with FMirror
Argue - needed by FBeckGUI
WOAcem.rexx - the script used at World of Amiga



▲ Here is another way to access remote servers from your Workbench. This is the root of the CD Amiga web site shown as a standard Directory Opus list. Note the state of the directory and httpd file. These are system information, just there for the server. If your server does this, be careful that you don't let FBeck delete them.

Scala MM300

PART
6

With the use of variables you can get a whole lot more out of Scale than just simple presentation sequences. John Kennedy brings you the sixth and final installment of this tutorial.

In many ways, Scale is a simplified programming language. It can display things on screen, react to input from the user, and it can even perform calculations.

It's this ability of Scale to think for itself that we'll be looking at this month. Adding some degree of intelligence to your Scale scripts can make them considerably more interesting. It, like me, you happen to use Scale to create shop window displays then you can use these techniques to create rolling demos which perform differently each time - making them much more interesting and extending their useful life.

What is a variable?

A variable is a location in memory which can be used to store a value as any programmer will tell you. Scale can use its variables to keep track of things, such as number of times a page has been displayed.

Scale can test the value currently stored in a variable, and act on it by jumping to a specific page in the script. This makes it possible to create loops for example. Scale can also display the contents of the variable as part of a page, which greatly increases the flexibility of your script.

First of all, we need to see where the variables can be entered. In order to see any action which might involve a variable, you'll first have to edit the layout screen slightly to make them visible. We did a similar thing to make it possible to add sounds to pages.

All you need to do is click on the System button from the menu layout on screen, and click the configuration button until you get to shuffle the Scala EX settings. Now drag the Variables event button closer to the top, so that when you return to the layout, there will be a column for Variables.



▲ Before you can use variables, you'll have to make them visible from the System menu. When you return to the layout window and click on the Variables button for any page, you'll open up the Variable window, like this.



▲ All variable operations are entered into this table window.

From this window here you can do three main things:

1. You can define the name and contents of the variable by entering it in the Set box. You can use a wide selection of names, so try and pick something which will help you remember what it does. 'Age' is more helpful than 'X' for example. If this is the first time the variable is being used, it's a good idea to set it to an initial value. Notice the digit 1 in the box. After you enter your first value, you can click on the little arrows which appear and add more. The number helps you keep track. You can also change an existing variable by using an operator such as plus or minus.

2. You can edit on the value of a variable by entering a statement in the 'If' box. For example, you could test if the age is over 21 using a command such as 'age > 21'. You can also test for 'less than', and equals to. Again, it's possible to enter multiple 'If' statements using the little arrows which appear.

3. Finally, you can do something if the condition defined above is met. You can do anything dramatic but you can select a page to jump to. By carefully defining your pages,

you can therefore make your script act in totally different ways depending on the value of this variable.

Now let's look at how we can use variables to create some scripts which appear to be smarter than usual.

Different types

The variables you define in Scale can store two different types of data: text (known as string variables) and numbers (known as integer variables). You don't have to define them in a special way, Scale will work out the type by looking at the first value you set it to.

When it comes to displaying the contents of variables, nothing could be simpler. All you need to do is define your text appearing on the screen as normal, but precede the variable name with an exclamation mark. For example, if you have a variable called 'name', then when you include the line 'My name is: !name' on a page, Scale will substitute the name when the script is run.



▲ This is what the screen looks like when you are displaying it.



▲ But when the script is executed, the variable contents are included instead.

Example project: Countdown Timer

Many videos and demos start with a countdown timer, so let's create one to start our Scala script with. Remember, once you've saved a script you can still load it back into another project and use it again. Building up a library of useful scripts is the best way to tackle any large Scale project.

Let's say we want our countdown script to start at 10, and countdown to 1. The easiest way to create a countdown without scripts is to create a page for each number. This is a little tedious to do, and if you wanted to countdown from 100 instead, it gets silly. A better way is to use a variable to keep track of the current count value. Here's how:

1. Define a page which does nothing but contain a variable event. The variable event will use the Set box to create a variable called 'count' which we will give the value 10. This is the first value which we will display. Switch off any page delay. ▼



2. Next we create a new page which will display the variable. I've used a large font here, the variable name starts with a '!' mark. In fact, the variable name is so big it's gone off the side of the page. This doesn't matter. Set the page delay to one second. ▼



3 Now for the clever part. On the third page we define a new variable event. We use all three parts in that first we subtract one from the variable, then we test if it is still greater than one and finally we loop back to the display page. Again, the pause setting is turned off. ▽



4 The last page isn't needed it's simply to demonstrate that the loop has finished. If you want your countdown to do something more exotic, why not include a 25 frame animation of a circle spinning around, or filling with grey. Why 25 frames? Because that will take a second to replay. ▽



Example project: A Quiz

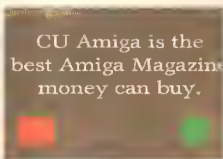
As Scale can keep track of numbers using variables it can also keep track of things like scores which means it's possible to use it to write simple games. With a little planning and ingenuity you could use Scale to create an adventure game if you wanted, but here we'll stick with the beginnings of a quiz program.

1 Once again, we start our script by creating and initialising a variable. In fact, this time we'll use two variables and set both to zero to start with. The names are "Question" (to keep track of the current question) and "Score" (to keep track of the player's score). ▽



2 Now we can define the questions. The best way to do this is to

get the first question page just right and then copy and paste it to add the others. Here's the layout of the question page. Notice how right away we use one of the variables in the top left of the screen. ▽

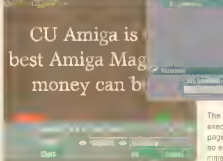


3 The code which looks after the buttons is where we'll build in the logic which checks for the right answer. You should know how to define an object as a button from a previous Scale tutorial.

This is the code for the correct answer. In the Variable box, it adds one to the score. The Gold box is set to Next, so the page automatically moves on. ▽



4. This is the code for the button which leads to the wrong answer. You can see it's identical, except ▽

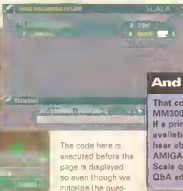


that there is no entry in the Variables box. As it's the wrong answer, the player won't get any points. If you were being harsh, you might want to subtract points for a wrong answer.

5. From the List Editor for the question page, I made sure that all the elements appeared in the right order. The List Editor is also a great place for selecting the Wipes for each element. The buttons zoom in, whereas the text just appears down the screen. ▽



6. One more thing is needed to finish off the question page: we need to increment the question number variable. This is done back at the main layout page, after a click on the Variable column button. ▽



tion to zero. It has one added to before it's displayed.

7. Now you can copy the question page for each question in your quiz. Click on the number of the page, and then the Copy button to duplicate it. You can then edit the button, changing the text as necessary. Remember also to change the button which increments the score to reflect the correct answer. ▽



8. Finally we get to the end of the quiz. The final page tells the user their score, and also the number of questions asked. You could even use Scale to calculate the percentage, but I'll leave that as an exercise for you. ▽
John Kennedy

You scored: 1 Score out of 1 Question

And finally...

That concludes our Scale MM300 series. If a printed manual is made available you can be sure to hear about it first in CU AMIGA. For now address Scale queries to the usual Q&A address.

The code here is executed before the page is displayed so even though we initialise the ques-

Reviews Index

Here it is: the long-awaited, revamped Reviews Index. The index now contains a summary of product reviews from only the previous four issues of CU, sorted by issue and then alphabetically. Hopefully, you will find this a bit easier to use. New to this page is the CU Editorial team's list of recommended products. If you don't own any of these, do yourself a favour and buy one immediately. As usual, if you have any comments or suggestions about this page, please contact us.



Hot Products

Title	Comment
Aminet Sets	The must-have shareware archive.
Draw Studio	Amiga's best structured art/illustration package.
Elastic Dreams	Swirly picture manipulation hi-jinks.
Epson Stylus Photo	For photo-realistic hardcopy.
Genetic Species	A damn fine game.
ImageFX 3.0	THE professional image processing software.
Miami 3.0	Makes jacking into the 'net so easy.
OctaMED SoundStudio	What? Still using Octamed 67? Get this now!
Opus Magellan	We love this Workbench replacement OS3.57.
Pace 56K Voice Modem	The Rolfe Royce of Modems.
Pagestream 3.3	You want to lay out pages? Look no further.
Phase5 PowerUp cards	PowerUp says it all.
Power Scan Magic	Throw away that Microvite monitor.
Power Tower	The best place to re-house your 1200.
PPaint 7.1	The best pixel paint package on any platform.
Queke	Another damn fine game.
Siamese RTG	Splice your PC to your Amiga.
SoundProbe	Truly awesome sample manipulation package.
TurboPrint 6	Must-have print enhancement package.
VoyagerNG 2.95	Surf the web in style.
Wizard Mouse	The rodent of choice in the CU offices.
Wordworth 7	The top digital quill on the Amiga.
CU Amiga Magazine	Of course.

Reviews Index

Title	Type	Comment	Score
April 98			
20,000 Web Graphics	Graphics (Clipart)	Extensive but unstructured collection of clipart	85%
Aminet 23	Various	More of the latest software from the Aminet	86%
DPoint 5 CD	Graphics (Paint)	A re-release of an old master	83%
Font machine	DTV (Fonts)	Makes creating colour fonts easy	90%
Siamese RTG 2.5	Network RTG package	The ultimate PC and Amiga integration	92%
Simon the Sorcerer	Adventure game	This re-release has great graphics, humour and puzzles	90%
Specy Classic '98	Emulation	Collection of games for your Specy or 84 emulator	89%
ST Fax Professional	Comms (Fax)	An excellent program for home or small business use	94%
Theme Park	Strategy game	A slightly aged, but addictive re-release	92%
Wingnuts	Flight sim	Tongue in cheek, good graphics, poor gameplay	67%
X-DVE 3.01	DTV (Effects)	Fast and flexible video effects package	92%

Reviews Index

Title	Type	Comment	Score
May 98			
ADescent	3D game	Good but needs work to become the ultimate Descent	82%
ArtStudio Pro	Graphics (cataloguer)	Under-delivers on features, pales before the competition	69%
Blizzard PPC 040/603	Accelerator (A1200)	The essential upgrade for all A1200 users	94%
Descent	3D game	Plays well but still has a few glitches	80%
Dynanode Modem	Modem	Speed is what matters and this modem doesn't deliver	75%
Elastic Dreame	Graphics (processor)	Not a rival for ImageFX but makes graphics great fun	82%
Fusion 3.1	Emulation (Mac)	Fusion is tops in Mac emulation	92%
Kids Rule QK II	Kids game	A compilation of three very poor games	40%
Pace 56 Modem	Modem	A high quality modem	82%
Picture Manager Pro 5	Graphics (cataloguer)	Impressive as a cataloguer and an image processor	90%
Playdays	Kids game	Too much work and too little fun	75%
Playdays Paint	Kids game	Great fun for kids - highly recommended	92%
Wordworth 7	Word processor	Simply brilliant	93%

Title	Type	Comment	Score
June 98			
AWeb-II 3.0	Comms (browser)	The first Amiga browser with Javascript	90%
ImageFX 3.0	Graphics (paint/process)	The best image processor goes from strength to strength	95%
Malice (for Quake)	3D game	Utterly brilliant, worth buying quake for alone	95%
MasterISO V2	CD-RW software	A great all round package	88%
Micronik External Scan Doubler	Scan Doubler	Well deserving of the Boing Ball	93%
Micronik Internal Scan Doubler	Scan Doubler	An inexpensive route to a high quality display	88%
Power Digital Camera	Digital Camera	Easy to use, fun, and cheap - but results don't impress	81%
Quake	3D game	The ultimate in atmospheric shoot 'em up action	95%
Sirius Genlock	Genlock	Superlative video output - at a price	90%
The Labyrinth of Time	Adventure game	Some design flaws, but an engaging game nonetheless	78%
Turboprint 6	Printer drivers	An essential companion to any modern printer	93%
TV-Autazino	TV Tuner	Good, but not ideally suited for Amiga use	75%

Title	Type	Comment	Score
July 98			
Amiga Forever	Amiga Emulator	Very workable Amiga emulation	87%
Aminet 24	Various	The latest downloads from the 'net	89%
Aminet Set 6	Various	A gargantuan collection of software	90%
Eyestech single-slot Zorro	Expansion (A1200)	Functional, but inelegant and expensive	78%
EZ-PC Tower	Tower system	An excellent, all-in-one Siemens system	89%
Flyin' High Patch/Data Disk	Racing game	Bug fixes and extra courses to make Flyin' High playable	74%
GammaSale	DTV (clips)	A great package for professional DTV	92%
Quake: Mission Pack 1	3D game	A great way to get more out of Quake	87%
Shrek for Quake	3D game	Probably one of the finest add-ons for Quake	88%
Tomato 3D	Graphics (3D)	Flawed, but exciting enough to risk	87%
Virtual Karting 2	Racing game	A sequel that should never have happened	40%
Whistle On Fire	Racing game	A fun game, marred by system unfriendliness	50%
Yamaha MU10	Sound card (MIDI)	Good, but not as flexible as a proper sound card	85%

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Method of assessment

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6

Keywords:

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Table

Redding

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Section

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Cryptic compiler

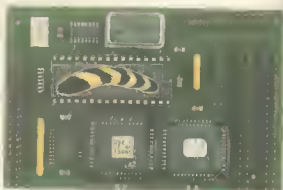


1. I am currently studying Computer Science. All of the coding is carried out using my Amiga and tools such as Dice

and GNU C. The finishing touches such as graphic interface and so on are finally done on PCs at college using Borland C++. Next year the course will cover C++. As GNU C can compile C++ code I need help as to the command line used for compiling. I've read the documentation that's supplied with GNU but to no avail. I would appreciate it if you or some one out there could help me. 2. I also have minor problems with a hard drive that I recently purchased. The hard drive in question is a Seagate 1.2 Gb drive. The problem with the drive is, that it won't boot from cold. I have to do a warm reset. This is a minor inconvenience and one I can live with.

An, Co. Meath

1. The GNU C/C++ compiler is a direct port from UNIX. Consequently, it has a rather arcane user interface, with hundreds of command-line switches and parameters. However, if the correct front-end to the compiler is called, all the tedious setting of options is performed by the compiler itself and an appropriate environment is created for whichever language you wish to use. When the compiler is invoked with the gcc command, it gets set up for standard C mode; when called with 'g++', C++ mode is set up. In addition, correct naming of files is important to make the compiler process a particular file as C or C++ source code. Files that are named with a suffix 'c' get compiled as C, files suffixed with '.cc', '.cxx', '.cpp' or '.C' get compiled as C++. This behaviour may be overridden with the -x switch. For



▲ Use fast HD floppy disks with the Catweasel controller.

example, entering the command 'g++ -x c++ source1.c source2.cpp -o myprog' will compile the two source files both as C++ (even though the first is named incorrectly) with the C++ default settings and will produce an executable called 'myprog'. This is not the place for a detailed discussion of GNU. For information that is more digestible than the documentation supplied with GNU C, point your web browser at http://www.ninemedia.com/GG/docs/GG_toc.html. The reason you cannot boot your machine from a cold reset (ie, switching your machine on) is because your hard drive does not get up to operating speed in time for the system to recognise it. When you perform a warm reset (e.g., pressing CTRL and the two Amiga keys), the hard disk is already spinning so is able to reach the correct speed in time. This is quite a common problem, especially when there are multiple devices connected to the IDE interface. There are two possible solutions: the first and simplest solution is to upgrade your KickStart ROM to version 3.1. OS3.1 has a longer reset delay built-in to overcome this very

problem. The second solution is to construct yourself a circuit which will create a longer reset delay and connect it into your Amiga's reset line. If you are handy with a soldering iron, take a look at [seminet/hack/bootsdelay.htm](http://seminet.hack/bootsdelay.htm).

Amiga DTP wizard



I am a pensioner and am attending a computer class locally. We use PCs, and I have been making greetings cards using Microsoft Publisher. This prints four pages on a sheet of A4 paper in such a way that when the paper is folded there is a picture on the front, a second picture on the inside left, a greeting on the inside right and my name on the back. I have an Amiga 1200 at home, and I would love to purchase a program that would do all this for me on my machine. I have two publishing programs, PageStream and PageSetter, and neither of these will do all four functions at once.

Can you please tell me if there is any such program available on this market at present and where I could obtain one.

Sidney Ray Surrey

InitCD problems

We have received several reports of problems when trying to launch the InitCD script on recent cover CD's. If InitCD fails with the error message: 'C:\UpdateCopy failed (return code 1634953583)' then perform the following: boot up your machine, insert CUCD24 in your CD drive, open a shell window and enter the command:

```
copy CUCD24:\lib\asyncio.library libe.
```

This problem is caused by the tool UpdateCopy which is called by InitCD. UpdateCopy requires the latest version of asyncio.library. If you have an older version of this library installed on your system, asyncio.library will load this instead and fail. The above command will copy the correct version of the library to your system.

I am unaware of any Amiga software that is specifically for creating greeting cards. But it is possible, through ARexx – the Amiga's more powerful equivalent to the PC's wizard – to 'program' other applications to let you do so.

For example, it is possible to write ARexx scripts or macros for say, Wordworth or PageStream, that asks the user for a greeting message and a picture to use and then will create the card in the manner you have described. If you don't feel up to the task of programming it yourself – don't worry. The chances are somebody has already written the very script that you need.

There are scripts available on the Aminet, for example, to create business cards, calendars, CD inlays, etc. Take a look in the directories text/print, text/dtp or util/rexx. If you do not have access to the internet you could try contacting a PD library to enquire if they have any collections of such scripts. Another good place to try would be your local user group

Troubled driving



I have recently installed a WDC 3.5" 210Mb hard disk into my Amiga 1200 with a Viper 1230/28MHz and 2Mb Fast Ram. I have been an Amiga user since 1982 and have used the same hard drive as an Overdrive PCMCIA device for years but decided to move it to the internal IDE port. I purchased the correct cable from Power Computing for this and I fitted, re-partitioned and formatted the disk correctly. This far everything seems fine. After successfully installing WB 3.0 I began to re-install my software, and there my problems started.

Everything installs fine, and appears in the relevant directory as it would normally. Some software works just fine, but others, e.g. DOPUS 4 refuses to work. When I try to load it from CLI, I get the message 'bad loadmodule hasp'. This also happens when I try to use other software, but not everything, which has confused me. I telephoned Power, and they suggested that I

changed the MaxTransfer rate using HDToolbox, which I did, and even though I re-formatted the drive, the same thing happened! I know that you have loads of enquiries, but this problem has rendered my computer almost useless, so I would appreciate some help.

Tim Hutchings, via e-mail

There are two obvious probable causes of your hard drive problems. The first one is, as Power pointed out, the MaxTransfer setting on each of the hard drive partitions; the second possibility is your power supply 1. The MaxTransfer setting, contrary to popular belief, is not a rate but a size. It tells your filing system how big a chunk to grab from the device in one go. You should not have to change it, except for some older IDE drives. These type of drives were never designed to have blocks greater than, say, 128K read from them at once. When you try to do so, the data gets mangled. This fault is an intermittent one,

since it only occurs when reading large files, and the symptoms tend to be things like bad hunk errors, etc. This could well be what is causing your problems.

The solution is to use HDToolbox (or an equivalent) to modify each of your partitions. First try changing MaxTransfer to 0x1FE00 (in decimal this is 127.5Kb). If it still does not work, try 0x1FE00 (83.5Kb). The procedure to do this is as follows:

Start up HDToolbox, select Partition Drive and click on your first hard drive partition. Then check the box marked Advanced Options, select Change, enter the desired value for MaxTransfer into the string requester (and press Return) and click OK. Repeat this for all the remaining partitions. When done, click on OK and then Save Changes to Drive. That's it! There is a law in computing known as Pournelle's Law: if you have a computer problem, check your cables first. There is an equivalent of this which applies to the A1200: if you have a problem, check your power supply first. The weedy PSU shipped with the A1200 is designed to cope with at most a 2.5" inch hard drive and a smelly memory expansion. 3.5" hard drives cause problems not only because of the greater power load in general and the larger amount of heat to be dissipated, but because the power connector on the internal IDE interface of an A1200 is not designed to take the load, either. The solution is to get an upgraded PSU and power the hard drive directly from it, not via the motherboard.

Keyboard bugs?

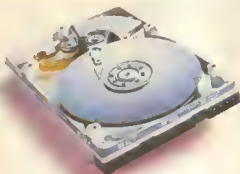


Some time ago I bought an EyeTech EZ-Key keyboard Interface and installed it. Everything seemed to work fine or so I thought. Only recently when my Amiga owner was using my system did he make me realise my keyboard adaptor was malfunctioning. The problem seems to be that the adaptor will not accept two keys pressed at the same time, for example playing a 'Doom' style game and press a key to walk forward. I will press a turn key the player stops walking forward and turns.

The keyboard adaptor will accept two commands at the same time as my original keyboard and this does not only occur in games, but serious applications. I originally thought this was an intermittent fault with all keyboard adaptors, which is why I did not realise it was a problem. But a friend of mine has an adaptor (from a different company) didn't suffer from this and worked without fault on the same system. My adaptor had trouble with his cost less than half the EyeTech solution. I have also tried three alternative keyboards, one of which was an Amiga 200C's



▲ Save yourself the hassle of swapping 750 floppy disks – with a CD-ROM drive.



▲ On page 18 scanner — a topless, Western Digital hard drive.

and they all fail to work correctly with the EZ Key. I tried these keyboards with my friend's adaptor and all of them, including my own, worked perfectly. So what could be the problem? Is there a software solution or is the keyboard adaptor at fault?

Richard Chapman, via e-mail

This is not a fault as such with the Eyetech keyboard adaptor; it's more of a feature. The interface does not handle simultaneous key-presses in the same way that the A1200 keyboard does. This is inherent in the interface itself: it does not matter what type of keyboard you connect it to. Similar problems occur with the Micronik keyboard interface. There is no solution to this problem, other than buying a different interface. The Ateco keyboard interface, for example, does allow multiple key-presses. Ateco Concepts products are distributed in the UK by White

Knight Technology, who may be contacted at 01620 822321.

Please, no more!

I know that you consider the A500 dead and that there are only a few people using one these days, but I still use it.

So I've heard that by setting specific jumpers on A500's board, the A500 could "see" the extra Fast RAM as Chip RAM — if you have a 1Mb Agnus, that is, which I do. Could you tell me which jumpers are they? 2. In order to upgrade from OCS to ECS which chips do I have to replace? Are there any consequences from such an upgrade? 3. I've decided to buy an accelerator (either Power Computing's Vipei 520CD or CSA's Demigore 500/2000). Could you give advice on what should I look for when buying an accelerator? (Do you happen to know the above two?)

Georgios Mavris-Artelis, via e-mail

The reason we consider the A500 dead is that it is now over 11 years old and has limited expansion potential simply because very little hardware is produced for it any more. I will answer your questions, but please, after this, no more A500 questions. 1. Yes, This is possible, but it actually requires physical modification of the motherboard (cutting of tracks, soldering, etc). Look at, for example: [amintec/hard/hack/a500chip.lha](#). 2. You must replace the Denise chip with an ECS Denise (chip number 8373). 3. The Vipei 520CD is good (see review in CU December '97). But ask yourself this — even if you perform the modifications above and buy a 520CD, you will still have a dated and under-powered machine, limited to only a 33MHz 020, 8Mb of Fast RAM and no AGA. A realistic minimum specification for an Amiga these days is a 25MHz 68040. Instead of spending money expending your A500, why not buy an A1200? They are available at absurdly cheap prices second hand, and even retail new at well under £200. You would then have a machine which is still supported by the market and which has vastly more potential.

HD (How Denser) floppies?

I want (need) an HD floppy drive for my A1200! I find that the faceplate Eyetech supplied me with for my internal floppy drive is both unattractive and falls off at regular intervals. I therefore decided to kill two birds with one stone and replace my dFD with a high density drive. However, I can't seem to find any way to do this. The high density drives on sale either come without a face-plate, are not designed to connect to the A1200's internal floppy drive connector, or are for the A4000 (which, I am told, can not be connected to an A1200). Is there any way that you know of to connect a high density floppy with a faceplate to my A1200 as dFD? Will a Catweasel allow me to do this?

Gerald Mellor, via e-mail

The pinout of the connector to an A1200 floppy drive is substantially different from that of a standard PC one. Therefore, it is not simply a case of connecting up a PC high density drive and hoping that it will work. It is actually possible to modify a PC drive to work with the

A1200's floppy drive interface (some of the later A1200's were shipped with an HD drive) but the 1200's I/O hardware is not up to the task of reading from an HD drive — they can only manage it at half speed. A better solution is something like the CatWeasel or Eyetech's DiskPlus system. These are both complete replacements for the A1200's floppy interface, and both allow the direct connection of full performance with PC HD floppy drives.

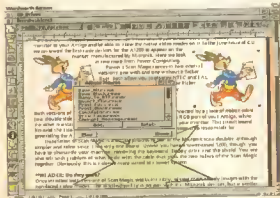
The CatWeasel is quite an extraordinary piece of kit. Not only does it give you the benefit of connecting cheap, fast and more capacious HD floppies to your Amiga, but it also allows you to read over 20 different file systems, including all PC and Mac formats (even the weird multi-sided, single-sided ones). It is a real boon to the emulation nut (sorry, retro enthusiast) as well, being capable of reading things like CBM 1541 and Apple IIe disks (providing you have a 5.25" drive).

Seedy ROM questions

I have a few questions to ask you. 1. I am having troubles with my CD-ROM. I have an A1200 with 10MB RAM, a 21GB hard drive and an LG Electronics 16 speed CD-ROM placed in an Eyetech tower using the Eyetech 4-way buffered IDE interface. I am using a driver called "cd device" and the CD++ filesystem to run the CD-ROM. My main problem is that the CD-ROM refuses to read certain files on some of your cover CD's even though I can access the files on a PC's CD-ROM. It also seems to have trouble reading the CD's while trying to run IntCD or when it tries to load an Amiga's default tool from the CD, the CD-ROM light comes on and stays on although it is reading nothing. I have already had to exchange my CD-ROM for another of the same make because the other one refused point blank to read any CD's. 2. Is there any way to read enhanced CD's on the Amiga as I have several with QuickTime movies that I wish to view? 3. Apart from your DIY option, is there any other piece of hardware which would allow me to listen to audio output from my CD-ROM?

Peter Lamont, via e-mail

1. My advice to you is to replace the driver software for your CD-ROM drive; the "cd.device" is an old system and not best able to



▲ Amiga Macos — the Amiga's better Macintosh equivalent.

copa with modern CD-ROMs and drives. You should try to get the "staple drive" (as shipped with IDE-Fix) and for a filing system get althai CacheCDFS (also shipped with IDE-Fix) or AmiCDFS2. Both of these systems come supplied on our coval CDs every month (IDE-Fix albeit in demonstration form), so there is really no excuse for not upgrading. 2. What do you mean by enhanced CDs? If you update your software as above, you will find that should be able to read all the standard types of CDs.

If you wish to be able to view QuickTime movies on your Amiga, you will need some software like QT or CyberQT (both available from the Amnet in the drawer: ghs/show). 3. You don't actually need any extra hardware to be able to listen to the audio output from your CD drive, just the correct cable. The audio mixer circuit takes account of the fact that the output levels produced by your Amiga's audio and the CD's audio are not the same, and mixes them equally. Such circuits are available from, for example, Eyetech and Power Computing.

How to write to Q&A

You can send your queries for tech tips to Q&A, CU Amiga Magazine, 37-39 Millharbour, Isle of Dogs, London E14 9TZ or preferably e-mail: q+a@amiga.co.uk. We can accept letters as text files on floppy disk. Please do not send an SAE. WE CANNOT RESPOND DIRECTLY TO QUERIES BY POST OR OVER THE PHONE OR E-MAIL, nor answer every Q&A we are sent. Sorry. We do appreciate that you may have a serious problem and until Amiga International re-open a UK office you may have no where else to turn, but we get so many questions we simply don't have the time or resources to answer them all. We do our best to use letters in Q&A that answer most common problems, so even if your own question is not answered you may find an appropriate solution here.

A to Z



Lithely, lovely and loquacious: three verbs which are rarely applied to John Kennedy... they do begin with "L" though.

Labels

An AmigaDOS command which is used inside scripts. It defines a label, which is effectively a location to which it is possible for the flow of control to jump to. It's used with the SKIP command. SKIP will jump to the label.

LAN

A Local Area Network is a collection of computers connected, usually via cable, to share files and printers. The Amiga can be networked with other Amigas and computers by means of the TCP/IP protocol.

Library

A set of program functions which can be shared by one or more programs. Libraries exist both in the Kickstart ROM and on disk.

Lightpen

An alternative input device to the mouse. Lightpens are used by holding them up to the screen whereby the computer can calculate their position. The Amiga hardware supports lightpens, but no-one uses them because they have quite a low resolution, and they make your arms ache.

Lightwave

One of the most successful Amiga programs ever. Lightwave is a professional quality image rendering program from NewTek, makers of the Video Toaster. It's been used in films and in almost every sci-fi TV show you can think of. Lightwave is also available for other platforms, but it owes a lot to the Amiga.

Linux

A version of the powerful multi-user multitasking UNIX operating system. It and NetBSD are available for the Amiga.

List

The most powerful AmigaDOS command. List has a multitude of options, and can be useful from time to time. All List does is create a list of the files present in the specified directory but it's so flexible. You can list files of a certain age, include dates, examine attribute files and list directories recursively. This makes it ideal for generating text files which can be processed by other AmigaDOS scripts or Rexx programs.

LMB

A TLA for "Left Mouse Button". The Amiga can actually cope with three mouse buttons although the third is rarely used. If your mouse does have an extra switch, PD utilities are available to make use of it. It can be handy having it act as a SHIFT key when dragging Workbench icons for example.

LoadWB

This AmigaDOS command usually towards the last line in the startup-sequence script which the Amiga loads and executes on booting. It loads and activates Workbench, so don't leave it out. It also has a "secret" option: LoadWB -debug will add extra commands to your Workbench menu. Go on, try it but save everything first. If you happen to have an ASCII terminal connected to your Amiga's serial port and operating at 9600 baud, so much the better.

Locale

One of the original Amiga Workbench floppy disks, Locale contains a Preferences editor which makes it possible to specify some information for localising your Amiga: you can alter some programs and Workbench routines to appear in Italian or Spanish for example.

Lock

One of those AmigaDOS commands you will probably never

use. Lock asks AmigaDOS to prevent writes to a disk drive. Why is this useful? Potentially it could be used when debugging a program, I suppose.

Logical Operators

These are the basic functions of Boolean maths, essentially the core of all microprocessors and computers. There are four basic operations: AND, OR, NOT and XOR or exclusive OR.

Loops

In programming terminology a loop is a sequence of instructions which can be repeated one or more times. For example, if a program has to perform a hundred identical calculations the programmer can choose to write out the same calculation one hundred times, or put the calculation in a loop and execute it one hundred times.

Loopback

By "looping back" an output to an input it is possible to test or debug a system. For example you might use the Amiga's serial port in loopback mode to test a communications program, but only if you were bored.

Low-level Language

A programming language which is better suited to computers than people. A good example is Assembly, which has a lot of very, very basic instructions. Each instruction can be directly translated to a few machine code instructions. Assembly language programs therefore run very quickly, but take an age to write and debug.

Lurk

To take part in a newsgroup by only watching and reading, never posting. Lurking is fine, but it's more fun to take part in conversations - unless they are very sad, such as those on the alt.digest newsgroup.

Back
chat

Backchat

Got an opinion on Amiga Inc's big plans or anything else? Email your comments to backchat @cu-amiga.co.uk or post them to the address below.

Backchat
CU Amiga
37-39 Millharbour
Isle of Dogs
London E14 9TZ

Cock up

Look I'm sorry but it has to be said. Amiga inc are making a cock up. I have owned an Amiga for three years knowing as I do that Intel make crap chips. FACT! If Amiga Inc plan to make x86s I may as well go and build myself a PC now. By my count I can build a PC for £330 inc VAT. What we want is a budget version of phase 5's philosophy: a single G3 unit with a decent graphics card and sound and other features that we are accustomed to for about £600-£700. If Apple can do it Amiga can. This message from Amiga inc fills me with despair. Hoping for something better.

Richard Faulkner, via email

Shape up!

Congratulations on becoming the world's best selling Amiga maga-

zine, but I must admit that I am disappointed in you. OK, so you are the world's best selling Amiga magazine, but still the magazine could be a lot better! The June 1998 issue is one of the worst I have seen for a long time. Let's start with the cover page: it's awful! Who has made this awful, childish, poor Spaceboy drawing? It looks like something from the '70s. Wake up, this is the 90s!

The four pages about the Reality Game Engine would have been more than enough, but then comes Tony Hoigan with another eight (!!) pages about the same boring stuff. I'm sure he has put a lot of work into it, but it's not the kind of stuff I want to read. Your August 1997 issue about coding and StormC was very good, but this time it was all just boring.

And it continues, with three pages about Spam! And then comes the two awfully designed pages about the World of Amiga. I wonder if the guy who made this article may be colour blind? I think you should give this man a course

in design quick as hell or sack him even quicker. The Screen and Tech Scene parts have good design though, and if all the articles in the magazine had been like this I would be much more satisfied.

I really looked forward to the Scan Doublers test, because then I thought I finally could decide which scandoubler to buy. But you only tested the Micronik Scan Doublers, so it didn't help me much. Why didn't you test the ScanDoublers which Power Computing sell? They even have versions with flickerfixes. Micronik don't. And what about the ScanDoublers Eyeteck sell? I am just as confused.

As you might see there are many things you can write about instead of spam and how to make games. A list of the different 4way-IDE interfaces Eyeteck, Power Computing and SlideSoft is an offering would be nice. Remember that there are a lot of people out there that have to upgrade their Amiga 1200 a bit. I also think you could start to write some articles about the demo scene, at least after big events like TP TG and Asm. Would it hurt so much to tell the rest of the world

about the revolutionary productions from demo parties like Rise by TRS! from TG98? I don't think so, it would at least be better than Spam. But it seems like Petro Tyschtschenko and the commercial Amiga market don't like the demo scene, which really is a pity. I think I have read that Petro didn't like the demo scene because it didn't help the Amiga, he would like us all to make games instead. That selfish Petro-1-#3-#3!

Torgel Amundsen, Norway.

Thanks for your frank comments Torgel. In order for CU Amiga to be a successful magazine (which is quite a feat in the Amiga market these days) we try to cover all aspects of Amiga usage. This does include coverage of the demo scene, not least in our regular round-ups of the best demos on our cover CDs. It also includes a diverse range of alternative areas and inevitably it's not all going to appeal to everyone at the same time. Our readership varies enormously in age, interests and aesthetic taste.

With any luck, sometime soon there will be a big enough pool of Amiga users to warrant magazines that can focus on specific areas and groups of users. At the moment that's a pipe dream. We have a hunch that "Amiga Scandoubler Magazine" wouldn't fare very well in the current climate. As for why we didn't review every scan doubler under the sun in the same issue, it's simply because they weren't all available at the same time. Rian Hughes supplied the cover illustration.

Tell the world

Everybody keeps going on about how others need to be



▲ Childish cover or a classic take on 80s retro culture night? Rian Hughes' June 98 CU Amiga cover.

informed that the Amiga is not just a glorified games machine and, on the contrary, is quite capable of professional use. Well I've come up with a simple way of letting people know this. So simple in fact that I can't think why I've not thought of it before!

How many people out there use

form which I don't quite understand either. Is it just a PC with an Amiga on a card? If so what's the point of that? Leaving that aside, there's still the matter of Amiga Inc/Gateway's ability to keep to their word.

Everyone seems to be in agreement that Gateway never say something until they know it's fact and

page 23 for a distillation of the facts and the latest developments.

Be U Amiga?

I purchased the July issue of CU Amiga on account of the WOA show report and the Be lecture. I got a strong pro BeOS message through out the mag which is no bad thing given the similarities between AmigaOS and BeOS.

Is there any chance of CU Amiga going dual format, covering Amiga and BeOS? There must be plenty of room on the CD ROM edition to include BeOS apps as well. It's a nutty suggestion but I'm sure you can see the advantages.

Derren Debono, via email

No, is the short answer. If BeOS does turn out to be used as a base for the new AmigaOS then there wouldn't inevitably be some connections along the way, but so far Amiga Inc have still not named their OS development partner, so we're still speculating about Be's significance at this stage. As it stands there's no reason to introduce Be-related articles into CU Amiga as a regular thing.

A New Era

So Amiga Inc. have finally spilled the beans about the next generation

Amiga and what should we expect about it? I'll tell you it's fantastic. The potential is enormous. I mark a new era in computing. But the success of the next generation depends on four things in my opinion.

• That Amiga Inc market it properly worldwide. Sega is planning \$500 million US and European launch for the same time that the first next generation Amigas hit the streets. This might be a bit much, ask for possibly not necessary, as the Sega console will be very underpowered compared to the new Amiga. But \$100-200 million is needed to ensure it's noticed.

• That it's available in all high street chains. If people can't find no one will buy it. It will be a hard fight for shelf space next Christmas with the Project X consoles, Sega's Dreamcast, the next generation WebTV with a powerful 3D chipset the PlayStation 2? The Nintendo 128? and low cost PCs.

• Killer software availability. Software sells hardware, and the next generation needs quality software. Both games and serious. To achieve this, developers need to begin development now. Amiga need to actively persuade developers to develop for the Amiga and co-funding should also be considered, as software is crucial.

Some people seem to think Amiga Inc killed the Amiga by ditching the existing OS, but I have to ask you. Do you really care if the OS you are running is the original AmigaOS, if the new OS is as effective and easy to use? And the Amiga community will still be here something I think is the most important reason for staying with the Amiga, both now and in the future. And it will still be called an Amiga. The spirit is still there! Save your pennies! I am!

Videi Langbelet, via email

PowerPC is the future

It is quite hard for me to stay with the Amiga as I am only 14 years old and I live in Australia. I play games all the time against all these PC users and almost always beat them, although it is getting difficult. This is because 95% of PC games are not out on the Amiga!

Since the Amiga has PowerPC and will be getting better all the time, why don't the people do something? If I could program I would like to become a play tester for Westwood after I became best in

"Why then did they tell us they would be going ahead with a dual PowerPC and 680x0 CPU before doing a U-turn?"

their Amigas to produce documents etc that others are going to see? Quite a lot I would imagine. I know I do from letters to posters and spreadsheet charts!

Well, when I've started doing it including a footnote in 8 point text so it's visible but unobtrusive on all the documents (the I produce which states that "This document was produced on an Amiga 1200 using..." and then I enter whichever software package was used.

Simple eh! And maybe, just maybe someone who reads it will think "Oh I didn't realise it was possible to produce something like this on an Amiga" and then begin to look further at our machine. Every little helps. By the way, unfortunately this was written at work using a Pictet. Confession as my Amiga is not yet Net connected!

Thanks for a great magazine

Deve Le Huray, via email

Where to now?

One thing I pride myself on is not being one of the PC-owning sheep. The will and ability to weigh up the facts and make an educated decision is something I hope to never lose. However I must confess in the light of Amiga's recent announcements, I'm looking for some advice.

To be honest I'm more than a little confused. For example Amiga Inc say they will have this amazing new machine in 18 months or so. We've heard that before haven't we? Then here's this PC-based interim plat-

form which I don't quite understand either. Is it just a PC with an Amiga on a card? If so what's the point of that? Leaving that aside, there's still the matter of Amiga Inc/Gateway's ability to keep to their word.

Everyone seems to be in agreement that Gateway never say something until they know it's fact and

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Everyone seems to be in agreement that Gateway never say something until they know it's fact and

stickers. Someone I forgot to stick them in. You should find you have your sticker with this issue. As for the future of CU Amiga, we'll be reflecting what you, the Amiga users, want from us. If this next generation Amiga



is coming out and is a massive hit, then our coverage will change accordingly. If it flops or (shock horror!) doesn't turn up in time (or at all) then we'll keep on with coverage of the "classic" Amigas. We don't have any plans to split into two magazines or launch a new Amiga mag in the immediate future.

Gareth Maley, via email

First of all, let us apologise to all subscribers for the missing

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▲ Sega Saturn, a new console with a \$1000 marketing budget.

Gates gag

This month's Gates gag comes from Aubrey Elliott. Can you do better than this?

Bill Gates dies in a car accident. He finds himself in purgatory, being sized up by St. Peter.

St. Peter: "I'm not sure whether to send you to Heaven or Hell. After all, you enormously helped society by putting a computer in almost every home in America, yet you also created that ghastly Windows '95. I'm going to do something I've never done before in your case: I'm going to let you decide where you want to go. I'm willing to let you visit both places briefly, if it will help your decision."

Gates: "Okay, let's try Hell first."

So Bill goes to Hell. It's a beautiful, clean, sandy beach with clear waters and lots of bikini-clad women sunning around, playing in the water, laughing and frolicking about. The sun is shining and the temperature is perfect. He's very pleased...

Gates: "This is great! If this is Hell, I really want to see Heaven!"

So off they go. Heaven is a place high in the clouds, with angels drifting about, playing harps and singing. It's nice, but not as enticing as Hell.

Gates: "I think I'd prefer Hell."

St. Peter: "Fine, you'll be there an instant."

Two weeks later, St. Peter decides to check on the late billionaire to see how he's doing in Hell. When he gets there, he finds Bill shackled to a wall, screaming amongst hot flames in a dark cave, being burned and tortured by demons.

St. Peter: "How's it going?"

Gates: "This is awful! It's nothing like the Hell I visited two weeks ago! What happened to that other place, with the beautiful beaches and the scantily-clad women playing in the water?"

St. Peter: "That was a demo."

the world at Command and Conquer. I have had a beta of Command and Conquer 2 for a little while, and in my opinion this is the best game ever. Now, put two and two together and the Amiga becomes a hot all over again. Ultra Online would give us a kick into multiplayer gaming also!

Please do something. ClickBOOM (or whoever else)!

Andrew Wierchowicki
<gameguru@vianet.net.au>

An Amiga for all

The Amiga has always been a graphics and video computer. The new Amiga planned by Amiga Inc. will be a spectacular multimedia machine. The web is full of sounds and animations.

In amongst all this fun, disabled users are in danger of being forgotten. At one time, the Amiga could be used with a Concept keyboard, for instance. Is this still true? The Amiga's Shell makes it possible in principle for a blind or partially sighted user to operate the machine without graphics. Almost all Amiga programs can be started up from the Shell. The program Script (on Aminet) should give access to any window, button or gadget in any program, purely from a verbal command. But this only works if the screens and windows have names, so that Script can find them.

So, a plea to programmers: name your windows so that the program can be used without a mouse. Web designers, please do a text only version of your pages. Let's have a computer which is friendly to all users.

Don Cox, doncox@enterprise.net

A true Amigan?

Recently there has been some discussion on the Internet about who

makes a true Amigan or not. A small minority of people in the Amiga community seem to be obsessed with the idea that the Amiga should be the only computer in the world and wouldn't accept there are other computers, even consoles such as the PlayStation.

Some even say the Amiga is excellent at everything and no other computers can match it. This may have been true eight or nine years ago but this kind of thinking is, in my opinion, extremely narrow minded and almost frightening. I believe every computer platform is good at some things and bad at others, and I see no reason whatsoever not to take advantage of these.

Wake up! It's time to accept that the Amiga is not number one. It's time to accept that other platforms can run things around an Amiga on certain tasks. It's time to accept that it is stupid to blandly state that non-Amiga owners (or non-Amigans?) are stupid and don't know a thing about computers, does that makes Mat Bettinson stupid? I think not.

It's time to realise strong and weak points of our Amigas, and other computers and combine them - eg. Siamese for instance, or at least learn them and suggest/implement these ideas into making the Amiga a better, more competitive computer.

As for saying who is a true Amigan or not - that is up to the individuals themselves, not for others to judge them, people have no right to judge others in any way. Remember: The Amiga is not a religion nor is it perfect.

Kyle Sterry, via email

Blimey! That's a provocatively well-balanced view of things!



▲ Westwood Studios's Command and Conquer: Tiberian Sun. Amiga version planned.

To the Point...

SWOS revitalised

Thanks for revitalising one of my favourite Amiga games ever SWOS! Seeing all the new World Cup editions of PlayStation and PC football games coming out left me and my best mate feeling a bit behind the times. Then I noticed the update cover disk on your July issue! Now I don't care if England win or get knocked out at the first stage. Well, that's a bit of a lie, but you get the point.

Nick Sinclair, East Anglia



Killer Instinct

I just had some fun playing Killer Instinct for Gameboy on my Amiga 1200 tonight. The game works just fine with Wzorka Ltd, and only suffers from a few small graphical problems with Amiga VGB. I'm attaching a screen grab of it running on Amiga VGB. I was surprised at the high quality of the game, despite the small screen size and that it is grayscale. In Wzorka-Lad it even runs at a playable speed on my 50MHz 68030.

Mathew R. Ighes, via email

Yeah, it looks just like the coin-op doesn't it?

Mad scientist

I am looking for users with like interests. I'd like to find other users with a scientific bent (notice my e-mail is madsci, which stands for my initials M A D and the fact that I practise the profession of chemistry).

Mark Dekeyser, Canada
email: medsci@vsnx.net

Points of View

Time for a few more opinions... please note that the views expressed here are not necessarily those of CU Amiga.



Get your story straight.



on the CU Amiga website late that night that the full facts were widely available.

Further problems stemmed from the fact that Amiga Inc.'s announcement appeared to be the end for any Amiga development for the next two years. All of this was unnecessary - by the time of the evening press release, AI had added a line about working with phase5, and by the end of the World of Amiga weekend there was a lot of talk about keeping the Amiga Classic line alive and giving Amiga owners something to keep them going. All this really should have been in from the start.

Problem is, Amiga Inc. don't know who to talk to. They seem to have been taking advice based more on its proximity to Sioux City than its usefulness. They should have talked to the major players such as phase5, HasegawaPartners and Index well enough before the announcement that they would not have had to spend the weekend in damage limitation, and had they chosen to discuss the announcement with the Amiga press we could have saved them no end of bad publicity - after all we know what this market is like and

WOA came and with it came The Big Announcement. Sure enough it was big, but it was also a total mess. Amiga Inc. should have had plenty of time for all the details, but seemed so far off the ball when it came to what the likely impact would be that it was humorous. The implications of it were to say the least heartening - the possibility of a serious revival of the Amiga suddenly looks rather good - but they were rather obscured by the unseemly mess of a presentation.

The fuss that rose from the announcement was in fact largely vapour - the problem was that the

"Problem is, Amiga Inc. don't know who to talk to. They seem to have been taking advice based more on its proximity to Sioux City than its usefulness."

information on general press sources such as CNet on-line appeared to be at odds with the information presented at the WOA conference. A telephone conference link up for non attending journalists world wide was so close to inaudible that those who listened in seemed to have heard a different press conference than the rest of us.

The Internet was buzzing with the false news that Amiga was going Intel and the main source, the CNet news report, seemed to be changed every few hours without explanation. It was not until the story was posted

how people will react. Amiga Inc. at last have a PR man, Bill McEwen.

Hopefully he is going to help AI with their presentation, but he isn't going to be able to advise them on the market. Amiga Inc. need to think seriously about their market intelligence because the WOA presentation made them look unprofessional and ill-informed. It is a shame, because given what they actually announced, it should have made everyone very happy with them instead. ■

Andrew Korn, Deputy Editor of CU Amiga Magazine

The Impending Schism

It's a cliché, so tired it can barely make it out of bed, but it continues to this day to be perhaps the best summary anyone could hope to make of the Amiga market since 1994: the curse of "may you live in interesting times." Who could be bored with all that bankruptcy intrigue going on?

But just because ownership gets settled doesn't mean life

for most purposes be distinct separate entities.

That means that Amiga developers will be faced with an unavoidable task: they will have to choose. Obviously, the decision will be different for each person, and will rely not only on how many but what sort of user stays with the current course of Amiga technology and which take a flyer on the 5.0 machines - and

"The burning question is - will there be a clean break, or just a splintering into countless little tiny shards?"

returns to normal. No, because we're on a collision course with a wedge that will be hammered straight into the Amiga market. The burning question is - will there be a clean break or just a splintering into countless little tiny shards?

The message Amiga Inc. delivered in May - the part they said out loud - was that on or about late 1999, new computers labeled "Amiga" which will bear presumably at least some resemblance in function if not in form to the machines we currently call "Amigas" will be available for purchase by people like you and me, not to mention all of the other wonderful people who will no doubt be attracted to its features.

What if they didn't point out - but are certainly very aware of - is that not every single current Amiga user will set aside their humble machines or their hopped-up system, then lowered A1200 with the PPC card inside, their video workstations in order to buy their new wonder computer. And since the degree and effectiveness of emulation on the new AmigaOS 5.0 machines is still very nebulous (since neither actually exist) these markets will

on what their competitors choose to do. After all, it can suddenly become very profitable to be in a market where three of your competitors disappear, even if your potential market has been cut in half.

The same logic applies the other way - if you can be the first to make it into a new market, fledgling though it may be, you will be the only game in town and can reap the rewards.

Amiga Inc. isn't exactly to "blame" - a split was coming in this market regardless of their actions. Some developers had decided to follow the route being defined by phase5 in the absence of AI guidance - and now that they have established their roadmap there are still some developers who have committed themselves to the existing Amiga market for the long haul. Of course others have quite vocally backed Amiga Inc.'s plans.

What will happen when the split comes? How will you handle it? How will we at CU handle it? Only time will tell, but alas they will certainly make for interesting times. ■

Jason Compton, US Correspondent for CU Amiga Magazine

It's not over yet



I've had enough of people going on as if Bill Gates is some kind of comic book style immortal anti-hero, destined to control every aspect of the post millennial universe for all eternity. Well he's not. So he might be the richest man in the world or thereabouts. He might be the most successful businessman ever. He might be the personification of 'the nerd who turned'. He might have brainwashed the computer using world into believing that there is no choice of computer platform and there never will be. He might have as much charisma as a blank CD.

Now I'm not saying we shot all ley off him and let him tramp the world underfoot like some kind of 21st century techno-dictator; quite the opposite in fact. What I am saying is yes, he has done well for himself and won't spend the winters of his later years worrying about whether he can afford another bar on the electric fire, but that doesn't make him or his products unchallengeable. Let alone immortal. To quote a popular phrase: "The only constant in life is change".

The common argument goes along the lines of "how can you expect any new computer system to take over when everyone uses Windows on Intel-based hardware?" Quite simple really: offer them something better and cheaper. Do you have a PC? It's OK, you don't have to answer out loud. Maybe another member of the household uses one, or maybe you use one at work. Now I bet you this PC isn't the same one you (or your invisible friend) used five years ago. Why? Because it was upgraded to

take advantage of the latest developments. At one stage or another you probably found it easier to ditch the old machine and get a whole new one, maybe transplanting a few of the older bits into the new machine. To summarise, the old computer was thrown out and a new one bought and put in its place. See, it happens!

Alternatives

So that's proof that people do change the physical lump of steel and plastic on their desks, even if they usually swap it for something else in the same product line. Next comes the problem of shifting them to a different product line. That one is a bit trickier to illustrate since there has been virtually no opportunity for people to do that for quite some time. However, people do want an alternative. Of course we are probably the most passionate group of computer users when it comes to this subject, but even people who have never used anything else but a PC would be interested in something that does the job better, not to mention something that does jobs their current PC can't do.

not much time really. Once you've used a modern mouse-driven computer desktop, learning the ropes of a new variant is comparable to falling off a log.

But what about cash? Microsoft aren't short of a few quid, which does give them a bit of an advantage over any potential rivals when it comes to marketing and advertising. Even so, Amiga Inc's parent company, Gateway are doing pretty well too. With very careful, considered and even cunning marketing and

well in the cup and hence a place in Europe and all the international TV coverage that goes with it - either that or they'll go back down to the First Division! Diverse some Amiga-based bankish point systems that make the current machines look like LCD calculators, and don't forget to include the Powered By Amiga logo on every screen. In flight entertainment systems! Give air lines an edge on the competition by offering them interactive DVD

"With very careful, considered and even cunning marketing and advertising strategies it would be possible for them to build up the Amiga brand once more."

advertising strategies it would be possible for them to build up the Amiga brand once more. Perhaps the trick is not to go straight for the man in the street with the hard sell via TV ads.

There's more than one way to skin a cat as they say. How about, for example, donating a few systems to major TV production units in exchange for a mention in the closing credits of

movie players that give each passenger a choice of a range of films or TV programmes to watch, plus a variety of games including arcade, strategy and classic board games to please different people, not forgetting the golden rule: "Powered by Amiga" stamped on every screen.

Amiga needs you

I'm sure we could all come up with a lot more ideas along these lines if we put our heads together as you never know Amiga Inc might even come up with a couple of their own. Here's an idea how about you all think up some other marketing/advertising/branding schemes and send them to us. We can then pass them on to Amiga Inc and they can choose to use any that they feel would be appropriate.

Yes that's decided. You write your crackpot marketing ideas down and we'll make sure they get to the right people. Don't go on about what you think the new hardware should be, or what you think Commodore did wrong in the past or any of that. Keep it short and sweet, because let's face it, if Amiga Inc are going to bring out a super computer within 18 months they're going to be pretty busy anyway.

Get that grey matter ticking over and send your ideas to: Crackpot Ideas, CU Amiga 37/39 Millharbour, Isle of Dogs, London E14 9TZ. Alternatively email your schemes to crackpot@cu-amiga.co.uk

Tony Horgan, Editor of CU Amiga



Everyone wants better tools and labour-saving appliances.

I suppose you think I'm forgetting the matter of software compatibility. Surely I'm not suggesting people will dump the likes of Microsoft Office? Well, yes. Why not? No-one on this earth was born with the ability to use Windows or a Windows application. That was a skill they were learnt over time and let's be frank,

a juggling system which has Powered By Amiga permanently etched into the corner of every screen? Work out a two or three year sponsorship deal with a Premiership football team that you think will make it into the European competitions in the following season (my tip is Middlesbrough for good sponsorship value and a chance of doing

TECHNO TRAGEDIES

The Konix Multisystem

Did you know that Britain almost had its own killer games console? It's true - one of the biggest techno tragedies of the past decade is that one of the most original console designs ever didn't make it to market.

Back in the late 1980s, a company called Konix were happily churning out joysticks. They were best known for their Speedlink joystick, an innovative handheld design and still my favourite control after all these years. Building joysticks for a living

Bitler, ROM, fast RAM, 12 MIP Arithmetic and Logic Unit, RISC Digital Signal Processor and A/D ports. In fact, the ASIC alone was as complicated as the 68000 processor used by the Amiga.

The CPU driving the system was a 16bits 68066 device, offering a palette of 4096 colours and resolutions of 256 by 200 or 512 by 200. There was a multi-channel stereo sound system, and most interesting of all, a floppy disk drive as well as a cartridge port. The floppy drive was able to be read constantly, piping data to the processor even in the middle of a game.

How ever the most innovative thing about the Konix was its design. It was called the "multisystem"

because it could transform its shape. One minute it had a steering wheel controller then a motorbike handlebars, then it was an aeroplane controller. There was also a fantastic array of promised goodies, including a light gun and some kind of chair which you could sit in for total immersion gameplay.

Konix also had the not-misconceivable talents of Jeff Minter on their side. Mr Minter is a gaming legend, with titles such as "Attack of the Mutant Camels" under his belt. Well, under his Afghan name like. Sadly the Konix never made it. Developers were unhappy at the

amount of RAM on board, only 128K, which meant animation and other effects were difficult. The floppy disk just couldn't provide the data needed to make animation effects work, and there was nothing for it but to increase the amount of on-board memory.

Unfortunately all this was going on when the price of memory was extremely high and the cost of doubling it to a more reasonable 256K had to be met from the profit margin. Konix

were set on bringing in the console price under £199.

The inevitable delays of producing a complicated system, and

Camels was one of the only games finished, and awesome as it was it wasn't going to be enough to launch an entire console.

Interestingly, Flare created a new system which went on to have slightly more success. But you can't guess its name. Jaguar. **John Kennedy**



▲ It's an aeroplane!

▼ ... No, it's a car.



must have seemed a pretty tedious way of doing business, and so Konix were tempted to try designing something else - a brand new games console.

The original design for the console came from a company called Flare Technology, who had designed a computer system magnificently called the Flare One. Remember, this was the 1980s, and names like "Flare", "Duran Duran" and "Eleni" were considered cool.

The heart of the Konix console was a single ASIC (Application Specific Integrated Circuit) which contained the video generator, colour palette, disk controller,



a lack of any finished third-party software finally did for it, and despite the UK press hoping and praying, the Multisystem never made it to a proper launch. Mutant



▲ Hang on it's a motorbike!

▼ ... And it's got pedals too.



Konix Multisystem specifications

- On-board memory: 256K (in later versions upgraded to 512K)
- Processor: 16-bit 68066 chip plus a custom 12 MHz ASIC chip (includes video generator, colour palette, disk controller, Bitler, ROM, fast RAM, 12 MIP Arithmetic and Logic Unit, 1095C Digital Signal Processor, stereo compact disk DACs and digital and analogue ports)
- Graphics: maximum resolution of 512x200 pixels and 16 colours
- Colour palette: 4,096 colours
- Sound: 25 (1) channel stereo CD quality sound
- Display output: Standard TV or RGB composite video
- Input output: Via TV or through stereo headphone socket
- Software format: Customised 800K 3.5" disks and expansion cartridge

AMIGA REPAIRS

COMPUTERS AND MONITORS

WHILE-U-WAIT!!!

Analogue is a recommended repair centre in the UK by Amiga Technology

£10.00 EXTRA CHARGE WHILE-U-WAIT SERVICE PICKUP & DELIVERY CHARGES £7.05 EACH WAY

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14" DIGITAL SVGA.....£99.95
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SCANDOUBLER.....£75.00

INTERNAL FLOPPY DRIVES

A500/A500+/A600/A1200£24.95
These drives work as High Density in a A1200

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